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By-Usitalo, Richard

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The Olympia, Washington, Public Schools report a workshop held to design a program for collecting and organizing information on the total student growth necessary for developing a curriculum for individualized instruction. In addition to student records, information was needed on (1) learning styles, (2) interest areas, (3) physical development patterns, (4) subject area strengths and weaknesses, (5) social relationships, and (6) family social-cultural expectations. Areas of effect on students were expected to be (1) cognitive, (2) physical, and (3) social-emotional. The workshop stressed four areas: (1) educational philosophy and goals, (2) identification of significant data, assessment techniques, and systems of constructive information, (3) development of a testing program, and (4) implementation of philosophy, assessment techniques, and use of meaningful data to define and reach target audiences. The present report is essentially divided according to these areas, with the addition of sections on evaluation and perspectives. This project was funded under a Title III, Elementary and Secondary Education Act grant. (BP)

**SYSTEMATIC  
AND  
SEQUENTIAL  
EVALUATION  
FOR  
INDIVIDUALIZING  
INSTRUCTION**

**SSII**

**OLYMPIA SCHOOL DISTRICT**

**319 East Fourth Ave.**

**Olympia, Washington**

**July 1, 1968**

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SYSTEMATIC AND SEQUENTIAL EVALUATION  
FOR  
INDIVIDUALIZING INSTRUCTION

A Report Of A Workshop

Edited by Richard Usitalo

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

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OLYMPIA SCHOOL DISTRICT  
319 East 4th Avenue  
Olympia, Washington

June 15, 1968

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of the Elementary and Secondary Education Act of 1965, P. L. 89-10

## WORKSHOP PARTICIPANTS

David Ensberg, Senior High Director of Guidance, Committee Coordinator  
Vera Boivin, First Grade  
Aurora Bolding, Fifth Grade  
Ken Born, Elementary Counselor  
Dale Davis, Elementary Counselor  
Eunice Carter, Fourth Grade  
Joyce Gillie, Elementary Principal  
Dorothy Graham, Special Education  
Marian Grambau, Psychologist  
Ruth Guiles, Fifth-Sixth Grade  
Richard Hunter, Junior High Principal  
Chloe Larvik, Fourth Grade  
Dale Lien, Elementary Principal  
Bill Mather, Senior High Counselor  
Ralph McBride, Elementary Counselor  
Tom Myers, Sixth Grade  
Bill Sherman, Junior High Vice Principal  
Don Tobin, Elementary Counselor  
John Weber, Elementary Physical Education Consultant  
Mildred Webster, First Grade  
Frances Woski, First Grade  
Cliff Scharf, Director of Special Services  
Richard Usitalo, Director of Curriculum  
William McDougall, Washington State University, Consultant  
Dale Anderson, Washington State University, Consultant  
Garth Blackham, Arizona State, Consultant

## PREFACE

"What seems to be needed is a 'way of life' that will enable education to place new meaning in its quest, that will enable education to be the humane process."

William R. Merz

When educators are provided with time and the opportunity to become involved, they can draw upon their creative talents to invent new ways to solve problems. The participants of this workshop demonstrated this vividly.

The Committee established some lofty goals for educators to strive for. They stretched their minds in doing so. They learned how to accept views of others. They were forced to clarify when the ideas were not clear to others - certainly they did not finish their job. Hopefully, they did establish a climate for continuous self-renewal.

The writer wishes to acknowledge the efforts of consultants Dr. William McDougall, Dr. Dale Anderson and Dr. Garth Blackham. They provided valuable technical assistance to the project. Of more value, however, they served as catalysts when the group seemed to be groping for ideas.

Richard Usitalo

Director of Curriculum

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## CHAPTER I

### INTRODUCTION AND OVERVIEW

Just as with political movements, there is a period within educational institutions when "the time is right." The curriculum director of the Olympia Public Schools, discovered this strategic time as he was guiding the Title III Elementary Counseling Project through its first year. The principals and teaching staffs, assisted by counselors, were trying to develop a curriculum to fit the individual student's strengths and weaknesses. The avenues leading toward this goal were impeded by a limited amount of significant information. While individual student records contained a wealth of data; grades, test scores, attendance records, height, weight, pictures of youngsters, examples of art, notations from parents and previous teachers, many aspects of total student growth were missing. Implementing the implied goals of the school district was impossible without acquiring more specific information such as: learning styles, interest areas, patterns of physical development, subject area strengths and weaknesses, social relationships, and family social-cultural expectations.

Discussion with other members of the Olympia administrative staff and personnel from the Washington State Department of Education, led the administration to apply for Title III funds to finance a summer project. As the ideas solidified and the project began to take shape, Rich Boyd, State Director of Federal Projects suggested the title of Systematic and Sequential Evaluation for Individualizing Instruction.

Upon governmental acceptance of the application for Title III funds, twenty-three members of the Olympia staff were selected to participate in the project. Selection was based on educational leadership as demonstrated by classroom excellence or superiority in classroom support. Effort was made to include a wide range of representatives from the entire school district.



The participants included elementary teachers, principals, elementary and secondary counselors psychologists, and curriculum director. Drs. Bill McDougall and Dale Anderson of Washington State University were invited to serve as consultants in the area of standardized test selection and use. Dr. Garth Blackham from Arizona State University was invited to serve in the areas of child development and learning theory.

The scope and implications of the project were not fully realized until the first few days of meeting together. As a preface to the work of the committee, the goals of the school system had to be translated into desired student outcomes. The outcomes were categorized into three domains: cognitive, physical and social-emotional. One group of participants was organized to develop a statement of educational philosophy and specific goals. Another group was charged with identifying significant data, outlining assessment techniques, and developing systems of constructive information necessary for formulating a meaningful and worthwhile program of instruction for the individual child. The development of a testing program was assigned as a distinctive task because of its magnitude. With this in mind, the testing group set about formulating a redesigned program which would be compatible with the philosophy and goals of the district and needs of the individual.

The challenge of the fourth group was to develop an effective way of implementing the philosophy, the assessment techniques and the use of meaningful data. This important group had to define the target audiences and select most effective methods of reaching each.

The most exciting aspect of the project was the enthusiasm exhibited by the participants as the realization of the full implications for improving education became apparent. Imagine twenty-three members of a small town school staff spending one month of their "summer vacation" completely absorbed

in a scholastic project creatively entitled Systematic and Sequential Evaluation for Individualizing Instruction.

Dedication can be measured by the nine and one-half days frequently spent during the four weeks. Incidentally, lunch was usually worked in during discussion or work sessions. A few minutes of football occasionally worked out the sitting cramps. Fourteen reams of duplicator paper indicates the effort exerted. Ideas and concepts were recorded in small groups, studied, analyzed and accepted upon approval of the entire group. In accordance with the old American custom, twenty-eight pounds of coffee were brewed to facilitate congeniality and concentration. Incredibly, the day didn't stop as the work day ended. Eight evening social functions assisted in establishing the esprit-de-corps of the group and drew the families into the activities. Some of the participant's remarks, included in the Appendix, reflect the feeling and enthusiasm of those fortunate enough to be involved in one of the most significant endeavors ever attempted by the Olympia School District.

The report is divided into six sections: Education Objectives, Data Collection and Transmission, Implementation Plan, Evaluation, Perspectives--One Year Later, and Appendix. Portions of some of these sections have been color coded to facilitate use of the guide. The order of the sections resembles the developmental plan of the study committee. It should be noted in the "Perspectives--One Year Later" section that the actual implementation schedule was altered considerably.

## CHAPTER II

## EDUCATIONAL OBJECTIVES

Philosophy

Public education's task is to provide opportunities for the maximum development of each individual in the community. The nature and scope of these opportunities in Olympia emphasize the need for individualizing instruction. As stated by Goodlad and Anderson, "What we know about learners is as useful in determining what we can ignore in teaching them as it is in determining what should be done to help them. Similarly, what we know about the content of instruction helps us to know both when to deemphasize subject-matter considerations and when to follow them rigorously. Placing these two kinds of knowledge side by side provides the flexible framework needed in timing and pacing the learning process."<sup>1</sup>

Individualizing instruction is the process of identifying the learner in terms of his cognitive, social, emotional, and physical development then establishing a developmental curriculum which will foster growth in these areas. Through flexible organization, students are offered personal experiences which lead toward growth in the development of cognitive skills, sensory-motor skills, positive self-regard, responsible and productive independence, creativity, and interpersonal relationships.

In striving for the maximum development of each individual, goals in the cognitive, social-emotional and physical-neuromuscular domains have been established.

<sup>1</sup>Goodlad and Anderson, The Nongraded Elementary School (Harcourt, Brace and World, Inc., 1963).

### A Climate For Growing

Facilitating the educational goals requires a climate that will permeate the entire school district. The forces affecting the class atmosphere are the parents, school board, superintendent and supporting staff, principal, counselor, nurse, librarian, custodian and cooks, aides, teachers and students.

Significant in consideration of a learning climate is an awareness of the interrelationship of its various aspects. A positive climate includes that which permits a child to grow intellectually, emotionally, socially, and physically. While a climate may positively attend to one or more of these aspects it may ignore or negatively effect others. The important thing to consider is that what effects one aspect will also effect the others. An illustration of this cause-and-effect principle can be seen when observing the effects of a foreign agent (germ, virus, splinter, etc.) when it enters the human body. While its primary impact is on the physical body, as indicated by a rise in temperature, it also effects the cognitive processes as thoughts are turned toward cure. Emotional involvement is reflected in fears or concerns regarding health and social impact is felt in degrees of isolation or attitudes toward other people.

A positive climate will result in the removal of the following barriers to learning as identified by Dr. Arthur Combs:

1. Whatever derogates a person's self gets in the way of learning.
2. Whatever threatens a person instead of challenging him gets in the way of learning.
3. Whatever checks the student's own exploration, because learning is an active process, is likely to get in the way of learning.
4. Whatever substitutes facts for meanings gets into the way of learning.
5. Whatever discourages a person's commitment and involvement gets in the way of learning.
6. Whatever substitutes artificial goals for real goals gets in the way of the discovery of meaning.

The desired goal is to establish and maintain a positive climate for developing cognitive, social-emotional, and physical-neuromuscular growth within the student.

The characteristics of a positive climate are:

1. Safe environment - teacher helps students to know what to expect.
  - A. Maintaining consistent teacher behavior.
  - B. Assisting students in constructing framework for classroom standards.
2. Responsiveness of adults
  - A. Entering into the world of the child.
  - B. Understanding the child's world as he perceives it.
  - C. Responding positively (share confusion and nourish enjoyment.)
3. Success proneness
  - A. Structuring the environment so the child will always have a degree of success.
  - B. Eliminating failure which is commonly thought of with negative connotations such as defeat, rejection and unworthiness. Failure means to fall short of goals but should be utilized to reassess goals or develop new strategies for achieving goals by students and teacher.
4. Opportunities for expression of feelings by students and teacher.
5. Channels for validation of one's self.
  - A. Assisting the individual to see his worth.
  - B. Assisting others in seeing the individual's worth.
6. Participation of students in decision making.
  - A. Assisting the student in identifying his goals.
  - B. Assisting student in selecting learning experiences which will bring personal meaning.
  - C. Solving problems of living together.
7. Assessment of teacher needs in relationship to meeting student needs.



### The Classification of Student Outcomes

The desired educational outcomes for students within the Olympia School District have been classified into three main categories--cognition, social-emotional, and physical neuromuscular. While these areas are closely intertwined, the distinction in the divisions is necessary both in terms of use for curriculum development and for student evaluation.

#### Cognitive Development

"The purpose which runs through and strengthens all other educational purposes--the common thread of education--is the development of the ability to think."  
Educational Policies Commission, 1961

1. Development of a zest for learning.
2. Efficient and effective learning style. e.g. (Developing individual programs strong in auditory stimuli for a student who utilizes this sensory mode most efficiently and effectively.)
3. Capacity to recognize personal goals consistent with level of learning.
4. Proficiency with basic academic skills.
5. Skill in identifying and defining problems.
6. Ability to recognize value-judgments and unstated assumptions. (unstated assumption.--e.g. All homogenously grouped fourth grade students are at the same learning level.)
7. Ability to evaluate sources of data.
8. Capability to distinguish fact from opinion. e.g. (Fact: boys are different from girls.) (Opinion: Boys are smarter than girls.)
9. Skill in gathering information for problem solving.
10. Ability in organizing and using various sources of information for problem solving.
11. Capacity to utilize increasing amounts of data.
12. Ability to utilize many methods or alternatives to problem solving.
13. Skill in utilization of assessment data for positive self-direction and self-correction. e.g. (I am doing well in my tennis game but I need to improve my serve.)



14. Ability to apply skills and principles to form generalizations.  
e.g. (Generalization: Most Orientals have dark hair.)
15. Competence in making inferences regarding cause-effect relations in each subject matter area. e.g. (Cause-effect relation: Unfair taxation was a cause of the Boston Tea Party.)
16. Capability for elaborating the dimensions of evolving concept.  
(e.g. Viewing a concept as applicable to the family, community, state, United States, etc.)
17. Development of a variety of concepts of social and physical reality.  
(Overlapping concepts for the same social or physical realities.)
18. Proficiency in using quantitative reasoning in problem solving.  
e.g. (Quantitative reasoning: Working with story problems in math.)
19. Facility for meaningful expression through verbal and written communication.
20. Ability to form criteria from which satisfactory choices of leisure time activities may be made.

#### Social-Emotional Development

"An individual's thinking is affected by such personal factors as motives, emotions, attitudes, needs, self concept, habits, skills and capacity."  
Michaelis, 1963

The desired social-emotional outcomes for the students in the Olympia School District are:

1. Development of a zest for living.
2. Individuality within the framework of social responsibility.
3. Increasing self-reliance and initiative.
4. Ability to identify and understand one's own feelings and motives.
5. Increasing capacity to cope with and adapt to intense negative and positive feelings.
6. Acceptance of one's capacities and physical abilities.
7. Increasing capacity to make emotional response appropriate for the individual.
8. Capacity to cope with societal expectations successfully.
9. Capacity for the expression and acceptance of positive and negative feelings.

10. Capacity to accept warm response and integrate it as self enhancing.
11. Formation of a sense of trust in others.
12. Capability to invest warm response toward others.
13. Ability to seek and extend satisfying social relationships.
14. Capacity to relate intimately and deeply to others.
15. Ability to form meaningful and satisfying relationships with adults and peers.
16. Capacity for establishing meaningful social responsibility.
17. Awareness of social expectations of significant adults and peer groups.
18. Ability to function in a variety of social roles.
19. Capacity to relate positively to one's age group.
20. Capacity to relate positively to the opposite sex.
21. Ability to accept a healthy sex role.
22. Willingness to embrace new relationships with ease and spontaneity.
23. Appreciation for esthetic values.
24. Understanding and appreciation for our historical heritage.
25. Increasing awareness of one's existence and a search for its meaning.

#### Physical - Neuromuscular Development

"A healthy mind (personality) is likely to accompany a healthy body, and a healthy body may well be a crucial determiner of personality health."  
 Jourard, 1963

The desired physical - neuromuscular outcomes for the students in the Olympia School District are:

1. Facilitate the maintenance and development of efficient physiological functioning.
2. Increasing refinement of neuromuscular skills for efficiency of movement. Neuromuscular: (large and small muscles, sensory modes)

3. Development of efficiency and economy of energy expended in routine activities.
4. Acquisition of emergency safety skills to avoid environment hazards. Emergency safety skills, (water skills and reflex conditioning.)
5. Development of sound health habits and attitudes.
6. Adoption of positive attitudes toward the human body, body processes, and sex differences.
7. Development of interest in participation in physical recreation for leisure time activities.

## CHAPTER III

## DATA COLLECTION AND TRANSMISSION

The educative process is one of assessment of a child in relation to the educational objectives; providing experiences to facilitate his movement toward the objectives; and then assessing that movement.

Evaluation of human growth and development may take many forms and may employ numerous evaluation-assessment devices, as well as individual and group responsibility. This implies that school administrators, teachers, consultants, and parents work together as a team in obtaining data which will nurture the individual development of each child. If this data is to be useful for developmental and prescriptive purposes, certain criteria must be considered:

1. Data gathering must be systematic and continuous. Little if any benefit can result from unrelated and spasmodic evaluation.
2. The data must have utility, i.e., it must lend itself to translation into action.
3. The data gathered must be relevant to the stated outcomes of the educational system.
4. The data must be objective, i.e., it must focus on behavioral events rather than value judgments.

Whatever form evaluation methods take, it must also be realized that data is only useful insofar as the user is able to understand, interpret, and adapt to it. The individual on whom the data is gathered reaps little reward without the thoughtful use of a skilled practitioner. Wisdom in use implies the gathering of varied samples of data and the understanding that conclusions are tentative. Meaning is given in accordance with amount and quality of supporting data.

### DATA SOURCES

Earlier in this study, educational objectives were categorized into three major domains: cognitive, social-emotional and physical-neuromuscular. If schools are assigned the task of providing growth experiences in these three areas, methods must be developed to assess growth.

Several sources of data are available in each of the three major domains. Observation, standardized tests, non-standardized devices, diagnostic parental interviews and child interviews are valuable in formulating a total evaluation system. Table 1 lists data sources for each of three classifications.

TABLE I -- DATA SOURCES CHART

EVALUATION TECHNIQUES	COGNITIVE	SOCIAL-EMOTIONAL	PHYSICAL-NEUROMUSCULAR
OBSERVATION	* Teacher Counselor Principal Librarian Consultants	* Teacher Playground Supervisor Counselor Principal Consultants	* Teacher * Nurse * P.E. Consultant Counselor
STANDARDIZED TESTS	General Aptitude Scholastic Aptitude Achievement Tests Optional Tests (see test manual)		Hearing Vision Fitness Motor Educability and Ability
NON-STANDARDIZED DEVICES	Informal Reading Inventories Teacher-made Tests	Sociograms Projective Techniques Self-perception Check Lists Autobiography Biographical	Motor Ability Educability and Fitness Tests and Checklists
DIAGNOSTIC PARENTAL INTERVIEW	* Counselor * Teacher Principal Psychologist	* Teacher * Counselor Principal Psychologist * Nurse	* Nurse P.E. Consultant * Teacher * Counselor Principal
PERSONAL INTERVIEW WITH CHILD	* Teacher * Counselor Principal Nurse Consultants Psychologist	* Teacher * Counselor Principal Nurse Consultants Psychologist	* Teacher * Counselor Principal Nurse Consultants Psychologist
* Indicates major collector of data			



### A Guide For Observation

Observation is useful as an evaluative technique to the extent that the teacher is able to focus on a child's behavior in relation to his movement toward the stated outcomes of education.

In a previous section, the stated goals of education for three domains - physical and neuromuscular, social-emotional, and cognitive were delineated in terms of desired student outcomes. These goals are intended to serve as a statement of what the learner is to be like when he has successfully completed a learning experience.

Observation information is useful when it is collected systematically. Each dimension that has been identified should be sampled on several occasions. The focus of the sample should be on observable rather than including any value judgments. The behavior sample should include the circumstances or context in which the behavior occurs.

## Cognitive Development

STATEMENT - Cognitive skills for acquiring information, understanding phenomena, solving problems and introducing new forms of ideas emerge gradually during the normal development of the child as a consequence of successful coping with his environment and planned experiences within the school. Though the skills that follow are in the cognitive domain, their attainment is enhanced through normal progress in the physical-neuromuscular and social-emotional domains.

### I. Initiating Responses (zest, motivation)

#### A. Independence

1. Can he get started with minimal assistance?
2. Does he require minimum structure in planning study time?
3. Can he make constructive use of free time?

#### B. Curiosity

1. Does he ask questions? What kinds?
2. Does he read unassigned material? What kinds?
3. Does he have outside interests? Are they varied?
4. Does he pursue (become engrossed in) his interests in depth.

#### D. Creativity

1. Does he speculate about solutions to problems to which he has no learned response?
2. Does he apply his problem solving skills in supporting his speculation?

#### D. Spontaneity

1. Does he make statements of enthusiasm regarding activities? school?
2. Does he demonstrate willingness to become involved?
3. Does he accept mistakes without withdrawing?
4. Does he demonstrate willingness to share experiences?

### II. Acquiring Information

#### A. Concerted Attention

1. Can he concentrate? how long? on what?
2. Is he distractable? by what?

#### B. Experiential Background

1. Does he seek relationships between new material and old material?
2. Can he describe similarities - differences between new and old material?
3. Can he structure and code new material? (memory)

### III. Understanding Experiences or Events

#### A. Concept Formation

1. Can he classify physical objects by form? size? shape? color? texture? sound? smell?
2. Can he classify objects by uses?
3. Can he classify objects by parts? composition?
4. Can he classify ideas by common characteristics?
5. Can he label (name) his classification basis?
6. Can he inter-relate points as in a cause and effect relationship?

#### B. Concept Application

1. Can he illustrate his understanding by translating to another form? (graphically, pictorially).
2. Can he see analogies that can be associated with the concept?
3. Can he suggest extensions (inferences, new ideas) beyond the concept he has formed?
4. Can he make a general (summary) statement relative to the established concept? (Generalization)
5. Is he able to recognize when a concept is applicable to a specific situation? (Application)

### IV. Solving Problems

#### A. Identifying the problem (An abstracting function)

1. Can he recognize the problems within his physical and social environment.
2. Can he abstract an elemental problem from a major problem?

#### B. Formulating hypothesis (Theories)

1. Can he formulate analytical questions that are related to the problem?
2. Can he generate a number of alternative hypothesis?

#### C. Establishing tests for hypotheses (Theory)

1. Can he develop tests to validate hypotheses?

#### D. Gathering Data

##### 1. Care in data collection

- a. Does he seek data from several frames of reference?
- b. Can he distinguish between relevant and irrelevant information?
- c. Can he distinguish between statements of fact and statements of opinion?
- d. Can he recognize unstated assumptions (implied by a statement)?

- e. Can he recognize valid and invalid reasoning?
- f. Can he recognize the bias or frame of reference of a source of information?
- g. Can he recognize the reliability (competency) of the source of information?

## 2. Sufficiency of data

- a. Does he seek an adequate amount of data?
- b. Does he place limitations (due to quantity and quality of data) on the hypotheses?

## E. Summarizing the Findings (generalizations)

- 1. Can he accept or reject the stated hypothesis?
- 2. Can he modify the hypothesis in light of the data collected?
- 3. Can he place appropriate limits on his findings?
- 4. Can he state a generalization in terms of his findings?

## V. Introducing New Ideas (intuition)

- 1. Can he overcome the restraints that prevent him from venturing a hunch?
- 2. Can he form hunches in uncertain situations?
- 3. Are hunches related to analogous situations?
- 4. Can he translate hunches to graphic form when he is unable to verbalize?
- 5. Can he apply problem solving skills to test his hunch?

## Social-Emotional Development

STATEMENT - In the identification of significant aspects of social and emotional development, one of the most critical factors is the source and mode of acquisition of values. Parents, peers, and other adults are all parts of the process of shaping an emerging value-structure. Identification models, emergence of a dynamic or changing concept of self, consequent roles in social interaction, and attitudes toward environment, allow the formation of the value-structure of each individual.

- I. **Identification Models** (CONSIDER: (a) The stability and consistence of relationships, (b) The nature of the relationship - real vs. fantasy.)

### A. Adults who have the most meaning.

- 1. Who does he speak of the most?
- 2. Who does he try to please?
- 3. Who does he resemble most in speech? behavior?

B. Peers who have the most meaning.

1. What are the values of his "best" friend?
2. Does he belong to a peer group? formal? informal? large? small?
3. What are the values of the people he would like to/does emulate?

C. Other groups.

1. Does he belong to ethnic groups? religious groups? political groups?

II. Concept of Self

A. Performance

1. What are his statements about his academic performance?
2. What are his statements about his out-of-school performance?

B. Statements about self

1. Does he describe self positively? negatively?
2. Does he describe himself as liked/unliked by others?

C. Statements about others

1. Does he describe others as supportive? hostile? aggressive?
2. Is he critical of others?

III. Roles in Social Interaction

A. Adaptability to a variety of social roles

1. Group membership away from home - What kind of groups? What role is taken within groups: leader? follower? What are the characteristics of the group with regard to: age? sex? number? interest or values? does he have any 'best' friends? few? several? none?
2. Group membership at home
  - a. Role in the family - Who does he mention most frequently? Is he the oldest? youngest? other? What people live at home? How is he punished? by whom for what? How does he see himself in the family? Does he prefer to play alone?
  - b. Activities at home - What are his hobbies? interests? What are his responsibilities at home? What does family participate in as a group?
3. Family
  - a. What is status of family in community? religious? economic? social? political? educational?
  - b. Does the family move frequently?
  - c. Does the family communicate with the school? how? how often? main concern?



#### IV. Attitudes Toward Environment

##### A. Attending (degree of involvement)

1. Does he attend visually? auditorily? both?
2. Is he involved actively? passively?

##### B. Responding

1. In his response to people does he move toward? away from? against?
2. How does he express his emotional involvement in situations that provoke fear? anger? affection?
3. Do his expressions of emotional involvement (fear, anger, affection) vary in intensity? frequency? duration?

#### Physical and Neuromuscular Development

STATEMENT - The child is recognized and accepted as unique within himself. His total psychophysiological development assumes the biological unity of his mind and body and is the sum of his specific intellectual, physical and social-emotional experiences developed through the medium of movement.

#### I. General Health

##### A. Sensory Modes

1. Eyes - Does he squint? rub his eyes frequently? turn head sideways? blink excessively? hold reading materials too near or too far from the eyes? is there dilation? Others: acuity and peripheral vision, color blindness.
2. Ears - Does he respond to verbal instructions? turn head? ask for repetition? Do ears have discharge? show redness? swelling?
3. Nose - Can he distinguish odors? Is he a mouth breather? Is there discharge? redness? swelling?
4. Mouth - Can he distinguish tastes? Is there excessive halitosis? Is there saliva control? What is the condition of the teeth? Are there lesions or sores on the lips? gums? tongue? lining of the mouth?
5. Skin - Are there lesions? open sores? infections? bruises? Is there discoloration (blotches, pale, flush)?

##### B. Physical Fitness

1. Posture - Does he stand, sit, walk erectly? have a sway back? have a protruding stomach? have a sunken chest (rounded shoulders)? walk toed-in? walk toed-out?



2. Energy Level - Is he physically active? hyperactive? sluggish? listless? restless? Does he tire quickly? Is there a time of day when he works most efficiently?
3. Height-Weight - (Physical Stature) Height, is he growing at a regular rate? rapidly? Height, are there significant increases? deviations?
4. Physical Abnormalities - Are there congenital defects? injuries? diseases? long term illnesses? heart or respiratory problems? Is he on medication?
5. Symptomatic Disturbances - Is there lack of bladder control? vomiting? headaches? continued coughing? excessive perspiration? dizziness? tenseness? nail biting? masturbation? encopresis?

#### C. Environmental Variables

1. Nutrition - Does he eat lunch? breakfast? are his meals balanced?
2. Clothing - Are clothes appropriate to the weather? Are they clean? too large? too small? in good repair?
3. Housing - Lives in a house? apartment? trailer? other? Has facilities for: studying? eating? sleeping? playing? cleanliness?
4. Neighborhood - Has opportunities for recreation?

D. Safety Awareness - Can recognize potential hazards in classroom? playground? in play activity?

E. Personal Hygiene - Demonstrates attention to: dental care? feminine-masculine hygiene? grooming? bathing? clothing? cosmetics? Does he use tobacco? alcohol? narcotics?

F. Leisure Time - Does he participate in group games and activities? Individual recreational activities?

## II. Biological-Physiological Development

A. Proportionate growth - Is there proportionate growth and distribution of muscle, fat and bone?

B. Sequential Neuromuscular Development

1. Fundamental Skills Acquisition - is the child proficient in: sitting? creeping? crawling? pushing? pulling? striking? throwing? balancing? walking? running? jumping? catching? climbing?
2. Refinement of control - Measured in terms of the fundamental skills, is the child proficient in: coordination? strength? speed? agility? power? relaxation? balance?

### 3. Bight Order Development

- a. Conditioned reflexes - How efficient are the reflective actions of his hands? eyes? legs? head? body as a whole?
- b. Eye control - Are his eye movements controlled and smooth? left-right? up-down? circular?
- c. Dominence - Has he established consistant dominance: eye? hand? foot? Has he established unilaterality? bilaterality? cross-laterality?
- d. Dexterity - Can he write or print legibly? Can he use implements efficiently (pencils, scissors, etc.)
- e. Auditory Discrimination - Can he discriminate sounds? Is there a hearing loss?
- f. Speech Sound Production - Is his articulation clear; pronunciation? rapidity? volume? inflection?
- g. Kinesthetic Awareness - Can he distinguish differences in temperature? size? shape? texture?

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### The Standardized Testing Program

A Testing Committee was formed as a sub-committee to the Systematic and Sequential Student Evaluation for Individualizing Instruction Committee (SSEII). The two specific objectives were:

1. To evaluate the present testing program and recommend changes that were compatible with the educational objectives of the Olympia School District.
2. To establish a standing testing committee.

The Testing Committee encourages the reader of this section to begin by reviewing the desired cognitive outcomes developed by another SSEII sub-committee since they will serve to establish the frame of reference which gives meaning to testing objectives of the district.

The Committee recommends that the standing testing committee be charged with the responsibility of reviewing standardized test instruments which would be of value in measuring behaviors in the non-cognitive areas as well as further testing refinements in the cognitive areas. The Committee's focus has remained within the cognitive domain.

The Committee supports the proposition that the fundamental criterion for establishing the success of a testing program rests on the degree to which it provided data that can be used assist the student in moving toward the attainment of the desired student outcomes of the district.

### Functions of Testing

Standardized test results are used by school personnel to refine the decision-making process in three areas of the school program: instruction, guidance, and school administration. Several functions which the testing program may serve in each of these areas are listed below. No test is intended to serve all of these functions. Test results are only one factor (in some cases the least significant factor) to be considered. Priority in the choice of tests and the use of their results should be given to those functions which assist in decisions relative to the individual pupil.



### Instructional Functions

Standardized tests are useful to:

1. Assist in the planning of activities for each pupil.
2. Assist in identifying discrepancies between individual potentiality and achievement.
3. Assist in identifying pupils who need special diagnostic study and prescriptive instruction.
4. Assist in providing a measure of the pupil's growth and development towards the desired student outcomes of the Olympia School district.
5. Assist in grouping pupils for instruction within a class.

### Guidance Functions

Standardized tests are useful to:

1. Assist the pupil in developing a positive and realistic self-concept.
2. Assist the pupil in forming educational and vocational goals.
3. Provide objective information to assist in parent conferences.

### Administrative Functions

Standardized tests are useful to:

1. Assist in formation of and assignment of classroom groups.
2. Assist in evaluating curricula, curricular emphases and pilot programs.



### The District Testing Schedule

In the subsequent pages, the tests to be used in the Olympia School District are described. The Committee has selected tests that may be utilized for the functions stated previously. Administration schedules have been developed with the functions in mind.

<u>Administration Date</u>	<u>Name of Test</u>	<u>Grades</u>											
		1	2	3	4	5	6	7	8	9	10	11	12
Specified by Teacher	Ginn Basic Reading Tests	x	x	x									
October	Large-Thorndike Intelligence Tests			x			x						
October	Sequential Tests of Educational Progress				x	x	x	x	x	x	x		
October	Differential Aptitude Tests								x				
Spring	Cooperative English Tests									x	x	x	

The following tests are optional and as such shall be employed only when requested by the individual student or deemed appropriate by members of the staff. With the exception of the Kuder Preference Record-Vocational and the Strong Vocational Interest Blank, all costs are borne by the student.

<u>Administration</u>	<u>Name of Test</u>	<u>Grades</u>											
		1	2	3	4	5	6	7	8	9	10	11	12
As deemed Appropriate	Kuder Preference Record-Vocational									x			
Spring	National Merit Scholarship Qualify- ing Test (NMSQT)											x	
October	Preliminary Scholastic Aptitude Test (PSAT)											x	
Five times yearly	Scholastic Aptitude test (SAT)												x
Five times yearly	American College Tests												x
Fall	Washington Pre-College Test												x
As deemed appropriate	Strong Vocational Interest Blank												x

Several other tests are used in the district for specific purposes. For example, the Iowa Silent Reading Test is used in grades 7 and 8 for the purposes of appropriately placing students in reading groups which do not exceed their frustration levels. Such test results that have a narrow function are not recorded in the student's cumulative folder.

## Tests Used In The School District

This section includes a brief overview of the test categories used by the district followed by a written description of each standardized test used. Test categories are:

### 1. Reading Readiness Tests

These tests are designed to assess the readiness of children to begin formal instruction in reading or for advancement to the next reading level, and to help locate problem areas which may impede progress. These tests must be considered in conjunction with many other factors which also contribute to success in reading. They serve as a useful tool in evaluating pupil progress.

### 2. Diagnostic Reading Tests

These tests provide a profile of those skills successfully learned and others yet to be mastered. Examination of group scores may reveal individual and class strengths and weaknesses. Since the student's deficiencies can be determined, the teacher is able to adjust instruction on an individual and class basis.

### 3. Scholastic Aptitude Tests

A scholastic aptitude test consists of a carefully selected series of problem situations. The solution of the items requires varying amounts of mental ability or skill.

The group test of verbal scholastic aptitude is the best prediction for measuring a student's chance of success in school subjects. The non-verbal section is designed to spot students whose language abilities have not been developed to the point where they can be assessed with the verbal section. Children with specific deficiencies in reading or who are hard of hearing are examples.

### 4. Achievement Tests

Achievement tests purport to measure the pupils proficiency in various aspects of the curriculum. Their objective is to determine what the pupil has learned.

An achievement test battery is made up of several tests covering the test author's conception of the core knowledge and skill segments of the curriculum.

## 5. Aptitude Tests

An aptitude is a condition or set of characteristics regarded as symptomatic of an individual's ability to acquire with training some (usually specified) knowledge, skill, or set of responses, such as the ability to speak a language, produce music, etc.

A differential aptitude test is a test battery which ordinarily includes measures of verbal reasoning and numerical ability aptitude just as the scholastic aptitude intelligence tests do. They also provide measures of other aptitudes mechanical, clerical; language usage, abstract reasoning and spatial relationships. The instruments yield a set of scores which recognized intra-individual differences, accepting the fact that a student may be fairly high in verbal ability, average in numerical, very high in mechanical aptitude, and very poor in clerical speed and accuracy. These multi-score batteries provide a more comprehensive coverage of mental functioning than is obtainable from the more limited scholastic aptitude test.

## 6. Optional Tests

Several categories of standardized tests are not administered to all students. Three basic categories of optional tests exist:

- A. Interest Inventories used by the counselors include: Kuder Preference Record and the Strong Vocational Interest Blanks.
- B. Tests administered to the students interested in college placement and/or financial aid include: National Merit Scholarship Qualifying Test, Washington Pre-College Test, The College Board Tests, and the American College test.

## 7. Individual Tests

Special service personnel administer individual tests to selected individuals who have been referred for a more intensive diagnosis. The tests used are:

- A. Stanford-Binet
- B. Wechsler Intelligence Scale for Children (WISC)
- C. Wechsler Adult Intelligence Scale (WAIS)
- D. Bender Visual Motor Gestalt
- E. Illinois Test of Psycho-linguistic Ability

### Description of The Tests Used

The Ginn Basic Reading Tests are an instructional tool constructed to accompany the Ginn Basic Reading Series adopted by the Olympia Public Schools. They are designed to diagnose the individual child's strengths

and weaknesses, to indicate his achievement of the objectives of the preceding level of reading and his readiness for the next level, to serve as a basis for regrouping, to provide objective data to be used in conferences with parents, to provide a permanent record of each child's reading development, and to evaluate a balanced reading program

These tests are used in grades 1 - 3. The pre-reading test is given after the readiness program has been completed and just prior to beginning the pre-primers. These tests are administered and scored in the elementary grades to small groups of children after the student has completed the previous level of work.

The normal distribution curve does not apply to all of the sub-tests. Teachers will find many scores clustered at the high scoring levels indicating the child's mastery of the material presented. The total score is of less significance than the profile of items missed which indicate areas of further instructional need.

Test profiles for the reading test which have been completed in the previous year should be passed on to the succeeding teacher. This gives an immediate record of the amount of progress the pupil made last year and his current reading status. These profiles should be destroyed before the student advances to the next grade level.

Although the test for readiness of reading has been moved ahead to become part of the first grade experience, it is recognized that kindergarten teachers depend upon a rating scale or inventory in evaluating their children. It is strongly recommended that these teachers devise an informal assessment instrument.



The Lorge-Thorndike Intelligence Test is comprised of five levels:

Level 1	Grades Kgn - 1
" 2	" 2 - 3
" 3	" 4 - 5
" 4	" 7 - 9
" 5	" 10 - 12

Levels 1 and 2 are comprised of non-verbal batteries only, and take approximately 35 minutes to administer.

Levels 3, 4 and 5 have both verbal and non-verbal batteries each of which takes 27 minutes to administer.

The test is designed to measure abstract intelligence which is defined as "The ability to work with ideas and relationships among ideas."

The following mental processes are descriptive of intelligent behavior and are sampled by the test.

1. Dealing with abstract and general concepts.
2. Interpretating and using symbols.
3. Dealing with relationships among concepts and symbols.
4. Dealing with flexibility in the organization of concepts and symbols.
5. Using one's experience in new patterns.
6. Utilizing power rather than speed in working with abstract material.

The general consensus of the authorities favors the use of this battery. The design of the battery emphasizes reasoning ability except for two sections in the verbal battery--word knowledge and arithmetic problem solving. The time is chosen so very few students would score higher with more time. Time is not a limiting factor to most students.

The physical properties are rated as excellent. The mean is 100 and standard deviation is 16, like most other scholastic aptitude tests.

They have low standard errors: from 4.4 in the Level Four verbal battery to 7.8 in the Level Two non-verbal battery. The only apparent drawback is the lack of percentile band reporting which is preferred by the district to facilitate more meaningful test interpretation.

The committee recommends that the tests be given in grade 3 and 6. The administrator's manual is self-explanatory permitting the teacher

to administer the test to his own class. Machine-scored tests are available for levels 3, 4 and 5, and scoring could either be done locally or through the Measurement Research Center, Inc. (MRC). Levels 1 and 2 are composed of non-verbal batteries only and must be hand scored by local staff members. The percentile band scores should be entered in both the cumulative folder and on the permanent record cards.

Every one should realize that intelligence tests do not measure the innate ability of an individual. Performance on a test depends in some degree upon experience. Therefore, interpretation of test results should take into consideration the background of experiences that a child has had. The fact that experience influences performance on an intelligence test does not negate the value of the test in helping to understand an individual and to provide appropriate learning experiences for him. If, at a particular point in time, an individual is low in the ability to deal with abstract ideas or symbols and relationships among them, then learning experiences in line with his present abilities need to be planned. However, a realization that experience affects performance on an intelligence test should prevent the user from making erroneous interpretations about the score obtained by the individual. One should remember that all measurement contains errors. No measurement, whether it is a measure of an individual's intelligence or his reading ability or his height or his weight, is absolutely accurate. For this reason one should never think of an intelligence test score as a point on a scale but rather as a score falling within a range of scores.

Scores obtained from the Verbal Battery of the Lorge-Thorndike Tests for individuals who are poor readers, should be used with caution. For the poor reader, the Non-verbal Battery should be used to obtain an estimate of

abstract reasoning ability.

All of the foregoing comments on factors that affect test performance should encourage caution about making absolute predictions about the future of an individual.

Care should be taken that scholastic aptitude scores are not used to label and thus limit our understanding of children. It should be recognized in advance that intelligence tests simply provide additional data about pupils to be used in planning the very best educational experiences. They do not supplant or displace any other valid lines of data about the child. When apparent discrepancies exist between the aptitude scores and student's achievement pattern, every effort should be made by the teacher to discover whether the problem lies in the pupil's attitudes, work-habits, the room climate, the home environment or in faulty testing. Teachers should give particular attention to the individual patterns of strengths and weaknesses. Other facets of intelligence and personality that are not sampled by this test should not be discounted.

The Sequential Tests of Educational Progress (STEP) battery is composed of six tests: reading, writing, mathematics, science, social studies, and listening. The batteries are designed to serve four grade levels: 4-6, 7-9, 10-12, 13-14. Two forms are available for each level with the exception of the essay test which has four forms at each level. Most of the batteries require a 70-minute or 2-35 minute testing periods.

The publisher states that STEP is based upon four assumptions:

1. "The primary goal of the whole educational process is the development of the individual student."
2. "Education is a continuous and cumulative process."
3. "The focus of education is upon the development of critical skills and understandings."
4. "The success of education is to be measured in terms of the individual student's ability to apply his school-learned skills in solving new problems."

STEP was designed to determine the extent to which individuals have acquired certain critical skills and understandings which might be the results of a number of courses and other experiences. The authors did not intend to imply that factual knowledge of a specific field was irrelevant, but that the tests would "emphasize" broad understandings and abilities to utilize learned skills in solving new problems rather than abilities to handle only the facts of lesson material."

Critics state that STEP leaves something to be desired in measuring pupil progress in clearly defined segments of the curriculum. The problems encountered in identifying an achievement test battery which has high validity in terms of specific fact and skill content in particular subject areas and at various grade levels, indicates that teacher-made tests are to be preferred for such evaluations. The global approach of STEP is preferred in an achievement test battery.

The reliability of the STEP "listening" test (a unique feature) is questioned because it cannot be known that the test is isolating listening from other skills, i.e. critical thinking, etc. The Committee recommends that "Listening" be omitted from the battery. Because the "Listening" test eliminates reading by the student, it may be of value for administration to individual students or to groups of students where a measurement of achievement independent of reading ability is desired.

The situational approach to item construction, used by STEP, contributes to wordy items, weighting all of the tests toward verbal skills. This is borne out by the high correlation found between STEP and SCAT, which leads to questions regarding the utility of the latter when STEP is used.

Most authorities agree that educators who recognize the high verbal loading of STEP will find it a useful instrument in measuring pupil progress towards the broad goals of education. Since this purpose is congruent with



the educational goals of the Olympia School District the Committee has chosen STEP as the best available achievement test battery.

STEP is to be administered by the classroom teacher in grades four through six and by the block teacher in grade seven. The suggestions for administration of the Differential Aptitude Test (found elsewhere in this document) should be followed in administering STEP in grades eight and nine. Administrative convenience is enhanced by the identical instructions and sample answers provided in each of the sub-tests. This makes it possible to administer several sub-tests at the same time.

"Scores" are reported in percentile bands. Reports of results in the form of class lists are recommended for grades four through seven. Reports of results for each grade by school will be of value at all levels. The recording of individual test results on permanent record cards is facilitated by the use of the individual student "press score" reports, individual profile sheets are also available to assist in interpreting test results. Item analysis may be used for evaluating aspects of the curriculum.

The test results will assist in providing a developmental record of each student; serve as one of several resources in identifying discrepancies between individual potentiality and achievement; serve to assist the teacher in planning curricular emphases for individual students, groups within the class, or an entire class. The test results will also aid the district in evaluating curricular emphases and pilot programs.

Possibly the greatest value of an achievement test is its function in diagnosing pupil strengths and weaknesses. This function requires a high degree of familiarity with the test and the implications of each test item.

A Standing Testing Committee should investigate the practicality of initiating a program of in-service training which will assist the staff in the refined use of STEP as a diagnostic tool. Stimulation and direction



for such an investigation is suggested by information included in STEP's "Teacher's Guide" booklet.

This booklet provides classification tables of items in STEP tests of Reading, Writing, Listening, Social Studies, Science and Mathematics. This analysis lists each test item under two categories first, skill; and second, the type of material. This booklet provides further insight as to the diagnostic possibilities of STEP. In the interest of stimulating further investigation, some of the skills purportedly measured by various test items are listed below:

1. Making inferences
2. Analyzing motivation
3. Criticizing
4. Implications of ideas
5. Judging validity of ideas
6. Recognizing intent
7. Thinking critically
8. Identifying generalizations
9. Identifying values
10. Distinguishing fact from opinion
11. Drawing conclusions
12. Defining problems
13. Suggesting hypothesis
14. Selecting procedures

The Differential Aptitude Tests (DAT) were developed to provide an integrated, scientific, and well-standardized procedure for measuring the abilities of boys and girls in grades eight through twelve for purposes of educational and vocational guidance. The DAT is made up of the following eight tests that are designed to appraise fundamental intellectual abilities and to avoid as much as possible dependence on particular school subjects:

1. The Verbal Reasoning Test is a measure of ability to understand concepts framed in words.
2. The Numerical Ability items are designed to test understanding of numerical relationships and facility in handling numerical concepts. Evidence substantiates the fact that VR and NA scores combined measure what is measured by intelligence and scholastic aptitude tests and are effective predictors of future academic performance.

3. The Abstract Reasoning Test is intended as a non-verbal measure of the student's reasoning ability.
4. The Clerical Speed and Accuracy Test is intended to measure speed of response in a simple perceptual task. It is the only speed test in the set.
5. The Mechanical Reasoning Test consists of pictorially presented mechanical situations together with simply worded questions.
6. The Space Relations Test is intended to measure the ability to visualize a constructed object from a picture of a pattern and to imagine how an object would appear if rotated in various ways.
7. The Language Usage is divided into two tests, Spelling and Grammar.
  - a. The Spelling Test is made up of a list of words selected from "Gates Spelling Difficulties."
  - b. The Grammar Test is intended to measure the student's ability to distinguish between good and bad grammar, punctuation, and word usage.

Reviewers have been hard pressed to find valid criticism of the Differential Aptitude Tests. The authors and test analysts report that the D.A.T. does predict (1) course grades, (2) achievement test scores, and (3) educational and vocational success. The analysts further agree that the goal of adequate reliability has, in general, been achieved.

The Committee recommends that the DAT be administered in the fall of the 8th grade year to allow students sufficient time to utilize the results in planning their high school course of study.

Examiners should keep in mind that advance preparation and provision for the best possible physical conditions are essential first steps in any good testing program. The room in which the tests are to be administered should have good light. The temperature of the room should be comfortable, and the room well ventilated. If these conditions can be satisfied in a large area such as the cafetorium, including the availability of sufficient work space, proper seating to discourage cheating, and enough proctors to aid the examiner, then these facilities are recommended because of the ease of standardizing the test administration. If not, testing in regular

classrooms is recommended.

Counselors will give the tests if the former arrangement is elected, utilizing teachers as proctors. Teachers will give the test if the latter is desirable, utilizing the counselor as a coordinator.

The results are given in percentile rank scores. A percentile rank is the percent of scores in a distribution equal to or lower than the score corresponding to the given rank. Thus a percentile rank always indicates your relative standing among a theoretical 100 persons representing a large norm group. The basic scoring service (\$.25 per pupil) provides raw scores and national percentiles for eight tests on press-on labels and class rosters.

The evaluation of an individual's scores on the DAT for guidance purposes involves consideration of both his general level of ability and irregularities in his performance from one test to another.

The Verbal Reasoning plus Numerical Ability category alone taps the same general area as most intelligence or general mental ability tests. The eight sub-tests can be equated. Thus, a profile can be plotted to the individual's relative standing in all fields. In order to determine whether or not the difference between performance sub-tests is significant or not, the authors suggest using one inch; measured vertically on the profile; as a rule of thumb. If the distance is one inch or greater, it is probable that there is a real difference in performance between tests. This rough approximation ensures that the standard error of measurement will automatically be considered when making decisions relative to an individual's strengths and weaknesses.

Although each of the tests is intended to make a unique contribution to the understanding of an individual student, it may often be advantageous to consider subgroups of two or more scores together. For instance, in

making grade predictions, the VR + NA has been found to be a good general predictor. The NA correlates with performance in English, Social Studies, Science, and Mathematics. The VR and Grammar tests have relatively high validities for predicting grades in most courses. Abstract Reasoning predicts best the subsequent performance of pupils in Science courses. The Spelling Test is an effective predictor of English, Foreign Language and Shorthand.

The DAT has additional value to the counselor because of the batteries inclusion of three tests which have vocational implications. These are the Clerical Speed and Accuracy, Mechanical Reasoning, and the Space Relations Tests. All have their greatest validity with respect to occupational criteria.

It is highly desirable to compile statistics relative to test performance and actual performance, locally. The data in the DAT manual represents general experience, but most important to any individual school is its own experience.

The Cooperative English Tests is administered to all ninth, tenth, and eleventh graders in the Olympia School District to assist in determining placement in the non-graded English program at Olympia High School. The test measures achievement in two general areas; written expression and reading. Six scores are reported: Vocabulary, Reading Comprehension (level, speed, and total) an English expression score, and total score.

The test authors suggest that the test can be helpful in academic adjustment, placement and evaluation. The manual indicates that a high expression score measures the student's ability to write well in essay questions. The reading comprehension measurement yields two scores, one unaffected by rate, and another directly related to the reading rate.

Adequate directions for test use are provided. A helpful student



profile based on percentile bands can be obtained.

The test is highly rated by the critics. These features are note-worthy:

1. Technical reports are written clearly and carefully,
2. A wealth of technical data on validity, reliability, and the test's norming is available.
3. The testing material is attractively put together and appealing to the students,

A few criticisms should be noted:

1. High schools in the norming sample were weighted in favor of small town and rural areas.
2. Some former weaknesses in predictive validity have not yet been corrected in the 1960 revision.

#### Description of Optional Tests Used

Secondary schools must be prepared to administer a number of optional tests, many of which are prerequisites for admittance into college or are used as a basis for selecting recipients of scholarships. In addition, interest inventories are available for administration to selected students.

Interest inventories are not tests, since there are no right or wrong responses. The inventory presents to the student a series of questions about his likes and dislikes, or his preferences, framed so that each response can be made by choosing between two or more suggested answers. The inventory is then scored for a variety of occupations or occupational fields. The results are frequently expressed in the form of a profile showing the relative strength of the individual's interests in different vocations, or how his interests compare with those of persons successfully engaged in various occupations.

The Kuder Preference Record (form C) is an interest inventory which purports to measure preferences in ten broad areas. These areas are: Outdoor, Mechanical, Computational, Scientific, Persuasive, Artistic, Literary, Musical, Social Service and Clerical. The Kuder is used to identify occupations for further study. Theoretically when preferences are defined



one can investigate the occupations that involve those preferred activities.

The questions are presented in groups of three. The student is requested to select from each group that which he would like most and that which he would like least.

Students can plot their own profiles immediately upon completion of the inventory. A list of sample vocations for each of the ten areas is printed on the reverse side of the profile sheet. The manual contains a job chart and an occupational family chart which can be used to extend the range of possible vocations to investigate.

The consensus of test analysts regarding the Kuder seems to be that although it can be used as a preliminary survey to interests it really cannot be considered as a fully developed instrument until further validation studies are available. The problem of instability of preference at the adolescent level should also be recognized.

The directions for taking the Kuder are self-explanatory. Other than distributing the materials, the examiner need only check to see that students are following directions.

The Committee recommends that the Kuder Preference Record-Vocational be utilized as an optional test to be administered individually or to groups when deemed appropriate. Some schools may prefer to substitute an occupational unit in place of this instrument.

High School seniors who wish to pursue, during a counseling encounter, further knowledge relative to their interests as they apply to the world of work, may take the Strong Vocational Interest Blank. The Strong is a more refined instrument than the Kuder. The student, when he sees the profile, can compare his responses to men in varying occupations and professions. The complicated scoring necessitates the test being sent to the testing company. The cost per test and scoring charges makes it impractical for

large group use.

The critics remind us that the predictive validity on interest inventories is questionable and recent research has not given them cause to change their mind.

The National Merit Scholarship Qualifying Test published by SRA is taken by second semester junior and first semester seniors, and is used to identify, honor, and encourage exceptionally talented young people through a nationwide program that assists a sizable number in obtaining a college education. The test yields eight scores: English Usage, Mathematics Usage, Social Studies, Reading, Natural Science Reading, Word Usage, Humanities Total, Science Total, and a Total Score. The examination fee (\$1.00) is borne by the candidate. The test requires 190 minutes, for administration which is considered a liberal time allotment. The test authors state that it is a test of educational development not of scholastic aptitude.

The Scholars are chosen without reference to financial need, but need will help determine the amount of the scholarship, once the scholar is determined.

The following test criticisms should be kept in mind:

1. Only in the first two sub-tests is achievement being measured (English and Mathematics Usage). The rest of the test is primarily measuring scholastic aptitude--yet SRA claims that the test is an excellent measure of achievement and not another aptitude test.
2. Statistics show that an average high school student gets 56% of the items on the test right. This would suggest that it is much too easy for the superior group for which it is primarily intended and therefore its discrimination utility for the superior student can be questioned.
3. The test manual does not present adequate predictive data.

The Preliminary Scholastic Aptitude Test, primarily designed for use in the 11th grade is used by the secondary guidance personnel for guidance purposes, scholarship testing, and an advanced look at how the student will perform on the SAT. Research studies reveal that there is a high correlation between PSAT and SAT scores.

The test takes two hours to administer and costs the student \$1.00. This fee also covers the cost of reporting the score. The test scores are sent directly to the student. Results are also sent to the high school.

Two scores, verbal and mathematical, are reported. Percentile norms based on a national sampling of high schools for eleventh and twelfth grade students are provided. The scores are reported on a scale ranging from twenty to eighty, paralleling the 200 to 800 range of scores on the SAT. The test is administered locally on a date established by the publisher, usually in October. The test critics state that the test measures what it purports to do.

The Scholastic Aptitude Test (SAT) is based on the College Board philosophy that only two cognitive traits (verbal and mathematical) contribute significantly to success in academic work.

The test was developed as an instrument to be administered to students

who aspire to attend a selected college so that college officials can locate those students with the greatest chance of success in their college work.

The test consists of five sections which take a total of 180 minutes testing time. The first three--completion items, opposites, and analogies--are scored together as a verbal sub-test, and the last two deal with word problems and data sufficiency items and yield a total mathematics score.

The SAT is administered six times during the year in testing centers designated by the Educational Testing Service (Olympia High School is such a center). The fee (7.00) is paid by the student. The candidate can designate three colleges as recipients of the test scores.

The scores (verbal and mathematics) are reported on a number scale from 200 to 800, with a mean of 500, and a standard deviation of 100. The standard error of measurement has varied from 30 to 35 points on the forms used from 1959-1962.

Test critics tend to agree on these features of the test:

1. The tests, while timed, are not based on speed--the unanswered items are beyond the level of the candidate.
2. The tests are relatively "cram resistant".
3. A large amount of normative data is available.
4. The test does a very effective job of estimating liberal arts scholarship potential.
5. The test's primary value lies in its annual revision of forms, adequate security, and voluminous normative and analytical statistical data.

A criticism often expressed is that in several instances, the difficulty of an item stems from "muddiness" of the passages, rather than the difficulty of the item. Test critics tend to agree that there is no better test available to estimate verbal and mathematical comprehension.

The more selective colleges require one or several College Board Achievement tests in addition to the SAT. The candidate pays approximately

\$7.50 for a group of three tests. The Educational Testing Service (ETS) will send the scores to the candidate's designated colleges.

A number of areas are tested: American History and Social Studies, Mathematics Level I (standard), Mathematics Level II (intensive), Chemistry, Physics, English Composition, and European History and World Cultures. Special arrangements are made for candidates to take Greek and Italian achievement tests, and to take Listening Comprehension test in French, German, Italian, Russian, and Spanish.

The achievement tests are offered at the testing centers four times a year (March, May, August, and December) for afternoon administration following the SAT administration in the morning. The achievement test score reporting is similar in structure to the SAT.

College catalogues will clarify what achievement tests must be taken. Normally the English achievement test and two others are required if achievement tests are required at all.

Some colleges require a special test called a Writing Sample (CEEB Series). For this test, the student is required to write for one hour on a specific subject. These essays are sent, unmarked, to the institution requesting the sample where they are used as part of the admission information or for placement in English sections.

A student may elect to take an examination to see if a college participant in the CEEB Advanced Placement Program will grant college credit, advanced placement, or both, for work accomplished at the high school level. These exams are scored from one to five, with scores of three, four and five generally acknowledged in some way by the participating institutions. The high school arranges for the administration of these tests. Subject matter available includes: German, Spanish, Latin, French, Chemistry, Biology, Physics, mathematics, English Composition and Literature, European History and American History.

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Each examination is three hours in length. The fee is \$5.00 for registration and \$10.00 for each examination taken.

The Washington Pre-College Testing Program was established in 1960 as a state-wide testing program of high school seniors through a cooperative effort between the high schools and colleges of the state.

The principle purposes of the program are to:

1. Provide guidance assistance for educational and vocational planning in high school and college.
2. Assist colleges in classification of students.
3. Provide data for useful evaluation and research.

The tests are administered in the high schools from September through December. The tests are scored in processing centers. Data reports are returned to the high schools as soon as possible.

The data report contains a list of all the high school courses which the student has taken, the grade obtained and the credits earned. The test score section of the data report lists sub-test scores as follows: English Composite, Vocabulary, English Usage, Spelling, Reading Speed, Reading Comprehension, Quantitative Skills, Applied Mathematics, and Mathematical Reasoning. An English Composite, Verbal Composite, and Quantitative Composite score is then listed. Colleges vary in their uses of these scores. Therefore, the high school counselor will have to communicate with each college if he wishes to ascertain the exact use of the score in a particular college. All scores are in standard score form. The mean for the norming group was 50 with a standard deviation of 10.

The lower half of the student's data report contains expected grade averages for the student in 38 college subject areas and for all his college courses combined. The counselors are urged to de-emphasize the predictions and to make the student aware of the limitations in reliability of grade prediction.

The counselor's manual is very clear and comprehensive in explaining the use of test results and suggestions for group interpretation. Statistical data is presented relative to the test's validity, reliability, norm groups, and standard error.

Several concerns have been expressed by the counselors at Olympia High School in their experience with the test:

1. The test results get back to the school quite late in the spring, leaving too little time to make adequate use of them within the high school.
2. The cost of approximately \$7.00 continues to add to the financial burden of getting into college.
3. The effect upon the student is difficult to assess when he has been made aware of his prediction score. In spite of the discussion of score limitations, many students appear very anxious over their scores.

Since the test is a pre-requisite to college entrance, this test must continue to remain in the optional testing program. Care in handling the test results should continue to be a concern of the school. A trained counselor must oversee the distribution of these scores--preferable on a personal basis, with ample time to discuss the implications of the results.

The American College Tests are published by SRA and are based on the Iowa Tests. Four developmental areas--English Usage, Mathematical Usage, Social Studies, Reading, and Natural Science Reading-- are measured.

Very few colleges have adopted this program. However, the high school counselors will provide information and forms for signing up for the test. Scores are reported to the college and copies are sent to the high school counseling department. The student must travel to a nearby college to actually take the test. The test is given nationally five times a year in October, December, February, May and August. The test fee is \$4.00.

#### Description of Individual Tests Available

The Stanford-Binet Intelligence Scale is a individually general intelligence test containing both verbal and non-verbal test items. The items are arranged at chronological age levels from age 2 to 14 years plus four adult levels, namely, Average Adult, Superior Adult I, Superior Adult II, and Superior Adult III.

The Stanford-Binet is administered by the school psychologist to a child upon the request of a teacher. Referral slips must be approved by the school principal. Test reports are kept in the office of the principal and/or counselor and are available for use by the teacher. They are not included in the child's cumulative folder.

Individual tests take as long as 1 1/2 hours to administer, and two to three hours to score, interpret and record. Due to the waiting list and the time involved, immediate testing service is not available.

The purposes for administering the test are:

1. To obtain a more detailed picture of a child's intellectual strengths and weaknesses;
2. To estimate in as valid and reliable a manner as possible the intellectual potential of a child;
3. To identify more accurately the child whose school problems are emotionally based;
4. To aid in the diagnosing of school and behavioral problems.

The Stanford-Binet Intelligence Scale yields a Mental Age and from this a ratio IQ is computed, with corrections made at the upper levels.

The Standard Deviation is approximately 16 IQ points. Standard Error of an obtained IQ is roughly 5 IQ points.

Youngsters who have been referred for individual testing usually fall into one of four categories: 1) the child who is not learning and who is suspected to be mentally slow; 2) the child whom is suspected of possessing a greater capacity for academic achievement than he is demonstrating; 3) the child whose learning pattern is very erratic; and 4) the child whose behavior is a deterrent to his classroom achievement.

The referral slip should describe the child's problems adequately so that the examiner can select the individual test most suitable for the pupil. The use of the test will vary with the needs of the child and his teacher. The IQ score by itself has little meaning. The results gain significance in light of the interpretation including such material as the motivational response, the scatter of sub-test or item scores, the life experiences of the child, and his feelings, attitudes, and aptitudes.

No test can accurately measure actual potential. The best that a test can do is measure the operating level of the child as he approaches standardized items presented in carefully controlled situations. From the examiner's careful observations, a guarded prognosis can be extremely valuable when used properly to supplement and support school achievement, teacher observations, anecdotal reports, and observed classroom behavior. Results are useless and perhaps damaging when taken out of context of the youngster's total environment and maturational pattern.

The Wechsler Intelligence Scale for Children (WISC) is an individually administered general intelligence test consisting of five verbal and five performance test. Norms are provided which yield a Verbal IQ, a Performance IQ, and a Full Scale IQ. Such IQ's are based on scaled scores for each level--not on a "mental age."

The WISC is administered to a child (age's 5-15) upon the request of a teacher. Referral slips must be approved by the school principal. Test reports are kept in the office of the principal and/or counselor but are

available for use to the teacher. They are not included in the child's cumulative folder.

Individual tests take as long as 1 1/2 hours to administer and two to three hours to score, interpret and record. Due to the waiting list and the time involved, immediate service is not available.

The purposes for administering the test are:

1. To obtain a more detailed picture of a child's intellectual strengths and weaknesses.
2. To estimate in a valid and reliable a manner as possible the intellectual potential of the child;
3. To identify more accurately the child whose school problems are emotionally based; and,
4. To aid in the diagnosing of school and behavioral problems.

Raw scores on the WISC are converted to scaled scores from tables based on the examinee's age. A scaled score of 10 is considered the average expectancy level for boys or girls in his specific age group. Individual sub-test scores are also converted to equivalent test ages and drawn as a profile of strength and weaknesses on the test report. These scaled scores are then summed and translated IQ scores.

The standard error of measurement varies from 4.25 at age 7 1/2, 3.36 at 10 1/2 to 3.68 at 13 1/2. For interpretive purposes at age 10 the probability is 2 chances out of 3 the true IQ score would not be more than 3 points above or below the obtained score.

Youngsters who have been referred for individual testing usually fall into one of four categories: 1) the child who is suspected of possessing a greater capacity for academic achievement than he is demonstrating; 2) the child who is not learning and who is suspected to be mentally slow; 3) the child whose learning pattern is very erratic; 4) and the child whose behavior is a deterrent to his classroom achievement.

The referral slip should describe the child's problems adequately so that the examiner can select the individual test most suitable for the pupil. The use of the test will vary with the needs of the pupil and his



teacher. The IQ score by itself has little meaning. The results gain significance in light of the interpretation including such material as the motivational response, the scatter of sub-test or item scores, the life experiences of the child, and his feelings, interests and aptitudes.

No test can accurately measure actual potential. The best that a test can do is measure the operating level of the child as he approaches standardized items presented in carefully controlled situations. From the examiner's careful observations, a guarded prognosis is made concerning the child's functional capacities. Such a prognosis can be extremely valuable when properly used to supplement and support school achievement, teacher observations, anecdotal reports, and observed classroom behavior. Results are useless and perhaps damaging when taken out of context of the youngster's total environment and maturational pattern.

The Wechsler Adult Intelligence Scale (WAIS) is an individually administered general intelligence test consisting of six verbal and five performance test. Norms are provided which yield a Verbal IQ, a Performance IQ, and a Full Scale IQ. Such IQ's are based on scaled scores for each level--not on a "mental age."

The WAIS is administered to an individual (age 16 or over) upon the request of a teacher. Referral slips must be approved by the school principal. Test reports are kept in the office of the principal and/or counselor and are available for use by the teacher. They are not included in the student's cumulative folder.

Individual tests take as long as 1 1/2 hours to administer and two to three hours to score, interpret and record. Due to the waiting list and the time involved, immediate testing service is not available.

The purposes for administering the test are:

1. To obtain a more detailed picture of the students intellectual strengths and weaknesses;

2. To estimate in as valid and reliable a manner as possible the intellectual potential of the student as it applies to his school performance;
3. To identify more accurately the student whose school problems are emotionally based; and,
4. To aid in the diagnosing of school and behavioral problems.

Raw scores on the WAIS are converted to scaled score from tables based on the examinee's age. A scaled score of 10 is considered the average expectancy level. Individual sub-test scores are drawn as a profile of strength and weaknesses on the test report. These scaled scores are then summed and translated to IQ scores.

Youngsters who have been referred for individual testing usually fall into one of four categories: 1) those who are suspected of possessing a greater capacity for academic achievement than they are demonstrating; 2) those who are not learning and who are suspected to be mentally slow; 3) those whose learning patterns are very erratic; and, 4) those whose behavior is a deterrent to their classroom achievement.

The referral slip should describe the student's problems adequately so that the examiner can select the individual test most suitable for the pupil. The use of the test will vary with the needs of the pupil and his teachers. The IQ score by itself has little meaning. The results gain significance in light of the interpretation including such materials as the motivational response, the scatter of sub-test or item scores, the life experiences of the student and his feelings, interests, and aptitudes.

No test that can accurately measure actual potential of a child. The best that a test can do is measure his operating level as he approaches standardized items presented in carefully controlled situations. From the examiner's careful observations, a guarded prognosis is made concerning the student's functional capacities. Such a prognosis can be extremely valuable when properly used to supplement and support school achievement, teacher observations, anecdotal reports and observed classroom behavior. Results are useless and perhaps damaging when taken out of context of the pupil's total environmental and maturational pattern.

The Bender Visual Motor Gestalt Test requires the individual to copy Gestalt forms. The test provides a situation which requires a continuous interplay between motor and sensory factors which can be observed and thoughtfully evaluated by the psychologist. Through its use with hundreds of boys and girls with both normal and exceptional development patterns, a maturational scale has been devised against which a child's visual motor functioning can be compared.

Since visual motor development tends to accompany intellectual development, performance allows the examiner greater insight into developmental disturbance which may be occurring within the child. Along with other supportive data the Bender becomes a very useful instrument in recognizing organic, developmental or emotional dysfunctioning. Reporting is done in a statement of subjective findings.

The Illinois Test of Psycho-Linguistic Ability is an individual diagnostic test to assess language development in children. The test attempts to measure receptivity to language, oral expression of language, and the association between the two processes.

Nine sub-tests sample behavior under the three above areas.

1. Auditory decoding: The ability to comprehend the spoken word.
2. Visual decoding: The ability to comprehend pictures and written words.
3. Auditory-vocal association: The ability to relate spoken words in a meaningful way.
4. Visual-motor association: The ability to relate meaningful visual symbols.
5. Vocal encoding: The ability to put ideas into words.
6. Motor encoding: The ability to express ideas in gestures.
7. Auditory-vocal automatic: Ability that permits one to predict future linguistic events from past experience.
8. Auditory-vocal sequence: The ability to correctly repeat a sequence of symbols previously heard.

9. Visual-motor sequence: The ability to reproduce a sequence of symbols previously seen.

The test is standardized for use with children from age two and one-half to nine. However, because of its diagnostic nature, it may be used with older children to identify or confirm deficit areas. Results are interpreted by the examiner in a statement form for use by the classroom teacher.

#### Use of Test Results

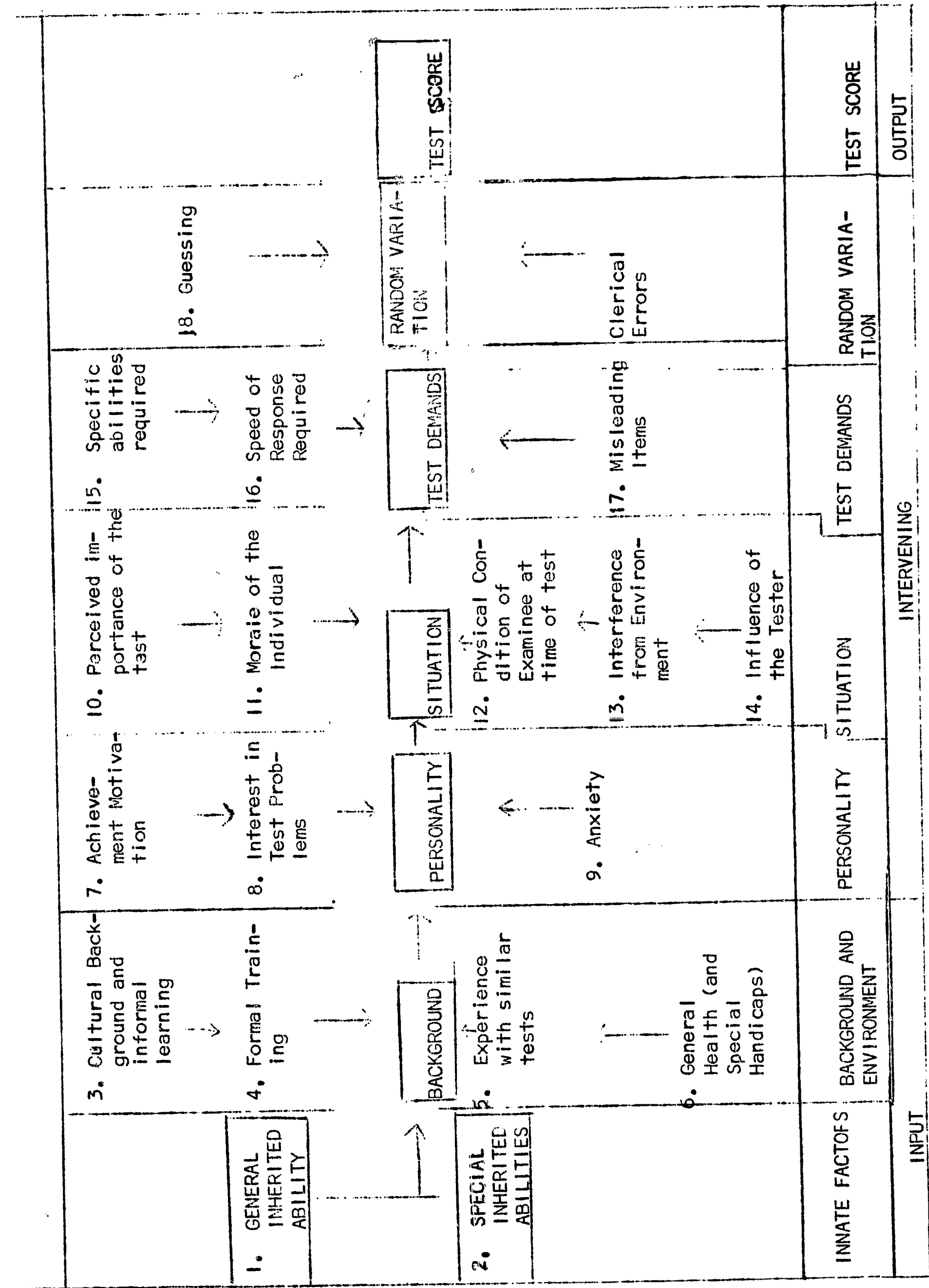
Where possible, all scores should be reported on a percentile band. Numerical scores, especially in intelligence and achievement, may tend to "brand" and reduce the teacher expectations of the student. All other tests, readiness, interest, etc., should be reported in a manner to comply with two major considerations: 1) most meaningful information and 2) the least danger of misinterpretation.

The scores from the test measuring scholastic achievement and/or aptitude should be entered in the cumulative record folder and on the permanent record card to provide each successive teacher an objective index of a child's progress. A place should be provided on both the cumulative record and the permanent record to enter significant data that may be obtained from any of the optional tests.

The most important aspect of a testing program is the interpretation of test results. Teachers must receive adequate in-service training to be knowledgeable in the interpretation and use of test results. The staff must continually keep in mind that the test score is one small indication of a child's total development. The limitation of this measure must be clearly understood. (Note the diagram on the following page which identifies some of the variables that influence a test score.) Test results should not be used to limit the child's growth possibilities.

Parents have the right to know whatever the school knows about the







abilities, the performance, and the problems of their children. The school has the responsibility to see that this right is not infringed upon.

Improper interpretation of test results to the pupil or his parents may appear conclusive rather than offering a basis for further planning. Any score that purports to measure ability or aptitude should be interpreted meaningfully.

This delicate area of test interpretation demands continued in-service attention. Therefore, the standing test committee is charged with the responsibility to provide such training opportunities the staff of the Olympia School District.

#### Standing Test Committee

The Test Committee recommends that a Standing Test Committee be formed for the 1967-1968 school year. The committee structure should become a permanent part of the Olympia School District structure.

The Standing Test Committee shall have the following responsibilities:

1. Continually review and evaluate the district testing program to make sure that each test contributes to meeting the educational needs of the students. This function would include the addition or deletion of a test if the need arose;
2. Plan in-service opportunities to better inform the teaching staff as to the functions and use of standardized tests;
3. Serve as in-service resources for standardized test information;
4. Communicate significant test committee decisions to their respective school staffs for approval or rejection.

The Standing Test Committee membership should be composed as follows:

1. TESTING COORDINATOR (Director of Curriculum or his delegate.
2. ONE COUNSELOR FROM EACH OF THE JUNIOR HIGH SCHOOLS (chosen by the respective school principals.)
3. THREE PRIMARY TEACHERS (we suggest these teachers be chosen from Boston Harbor, Garfield, and Rogers.)
4. ONE KINDERGARTEN TEACHER (Chosen by the testing coordinator.)
5. THREE INTERMEDIATE TEACHERS (we suggest the intermediate teachers be chosen from Roosevelt, Lincoln, and McKinley.)

6. ONE ELEMENTARY PRINCIPAL (L.P. Brown principal.)
7. TWO ELEMENTARY COUNSELORS (The two elementary counselors should be chosen from Madison and McLane.)
8. DIRECTOR OF SPECIAL SERVICES (or his delegate.)
9. DIRECTOR OF GUIDANCE AT THE HIGH SCHOOL (or his delegate.)
10. ONE SCHOOL PSYCHOLOGIST (Chosen by the Director of Special Services.)

The testing coordinator and the building principals shall agree on the teachers chosen in numbers three and four. The permanent committee shall have the right to alter the composition of the group if the need becomes evident to the committee membership.

The duties of the testing coordinator are:

1. Serve as chairman of the test committee;
2. Arrange for testing materials and assume responsibility for their distribution;
3. Arrange for the test committee meetings and notify the membership of each meeting;
4. Serve as a resource to members of the test committee by supplying information pertinent to testing;
5. Formulate the committee meeting agenda;
6. Be responsible for seeing that the test committee minutes are kept on file; and
7. Oversee the testing budget.

The standing Test Committee must meet at least three times during the school year, during the first week in October, the second week in January, and the second week in May. The place shall be designated by the testing coordinator.

#### Ethical Considerations in Test Use

The Testing Committee maintains that the ethical considerations of prime import regarding educational-psychological testing reside primarily in the areas of interpretation and communication. These facets of testing must be embraced by all who are concerned, layman as well as professional.

The Association for Measurement and Evaluation in Guidance; a member of the American Personnel and Guidance Association, recommends that the

public be informed as to what tests can and cannot do, the appropriate and inappropriate uses of tests, and the strengths and limitations of tests. Educators must have the necessary training to handle this responsibility.

In order to accept the social consequences of educational-psychological testing, certain guide lines for ethical practice must be adhered to. The following principles for testing are taken from the American Personnel and Guidance Association's "Ethical Standards."

1. The primary purpose of psychological testing is to provide objective and comparative measures for use in self-evaluation or evaluation by others of general or specific attributes.
2. Generally, test results constitute only one of a variety of pertinent data for personnel and guidance decisions. It is the member's responsibility to provide adequate orientation or information to the examinee (s) so that the results of testing may be placed in proper perspective with other relevant factors.
3. When making any statements to the public about tests and testing care must be taken to give accurate information and to avoid any false claims or misconceptions.
4. Different tests demand different levels of competence for administration, scoring, and interpretation. It is therefore the responsibility of the member to recognize the limits of his competence and to perform only those functions which fall within his preparation and competence.
5. In selecting tests for use in a given situation or with a particular client the member must consider not only general but also specific validity, reliability, and appropriateness of the test (s).
6. Tests should be administered under the same conditions which were established in their standardization. Except for research purposes explicitly stated, any departures from these conditions as well as unusual behavior or irregularities during the testing session which may affect the interpretation of the test results, must be fully noted and reported. In this connection, unsupervised test-taking or the use of tests through the mails are of questionable value.
7. The value of psychological tests depends in part on the novelty to persons taking them. Any prior information, coaching or reproduction of test materials tends to invalidate test results. Therefore, test security is one of the professional obligations of the members.

8. The member has the responsibility to inform the examinee (s) as to the purpose of testing. The criteria of examinee's welfare and/or explicit prior understanding with him should determine who the recipients of the test results may be.
9. The member should guard against the appropriation, reproduction, or modifications of published tests or parts thereof without express permission and adequate recognition of the original author or publisher.



## GLOSSARY OF TESTING TERMS

**Academic Aptitude:** The combination of native and acquired abilities that is needed for school work; likelihood of success in mastering academic work, as estimated from measures of the necessary abilities. (also called scholastic aptitude.)

**Achievement age:** The age for which a given achievement test score is the real or estimated average. (Also called educational age or subject age.) If the achievement age corresponding to a score of 36 on a reading test is 10 years, 7 months (10-7), this means that pupils 10 years, 7 months achieve, on the average, a score of 36 on that test.

**Achievement Test:** A test that measures the extent to which a person has "achieved" something--acquired certain information or mastered certain skills, usually as a result of specific instruction.

**Age Equivalent:** The age for which a given score is the real or estimated average score.

**Alternate-form reliability:** The closeness of correspondence, or correlation, between results on alternate (i.e. equivalent or parallel) forms of a test; thus, a measure of the extent to which the two forms are consistent or reliable in measuring whatever they do measure, assuming that the examinees themselves do not change in the abilities measured between the two test administration dates.

**Aptitude:** A combination of abilities and other characteristics, whether native or acquired, known or believed to be indicative of an individual's ability to learn in some particular area. Thus "musical aptitude" would refer broadly to that combination of physical and mental characteristics, motivational factors and conceivably other characteristics, which is conducive to acquiring proficiency in the musical field. Some exclude motivational factors, including interests, from the concept of "aptitude", but the more comprehensive use seems preferable. The layman may think of "aptitude" as referring only to some inborn capacity; the term is no longer so restricted in its psychological or measurement usage.

**Arithmetic Mean:** The sum of a set of scores divided by the number of scores. (Commonly called average, mean.)

**Average:** A general term applied to measures of central tendency. The three most widely used averages are the arithmetic mean, the median, and the mode.

**Battery:** A group of several tests standardized on the same population, so that results on the several tests are comparable. Sometime loosely applied to any group of tests administered together, even though not standardized on the same subjects.

**Coefficient of Correlation (r):** A measure of the degree of relationship, or "going-togetherness," between two sets of measures for the same group of individuals. The correlation coefficient most frequently used in test development and educational research is that known as the Pearson



(Pearsonian)  $r$ , so named for Karl Pearson originator of the method, or as the product-moment  $r$ , to denote the mathematical basis of its calculation. Unless otherwise specified "correlation" usually means denoting complete absence of relationship, to 1.00, denoting perfect correspondence, and may be either positive or negative.

**Correlation:** Relationship or "going-togetherness" between two scores or measures; tendency of one score to vary concomitantly with the other, as the tendency of students of high IQ to be above average in reading ability. The existence of a strong relationship--i.e., a high correlation--between two variables does not necessarily indicate that one has any causal influence on the other. (see coefficient of correlation).

**Criterion:** A standard by which a test may be judged or evaluated; a set of scores, ratings, etc., that a test is designed to predict or to correlate with. (see validity)

**Deviation:** The amount by which a score differs from some reference value, such as the mean, the norm, or the score on some other test.

**Diagnostic Test:** A test used to "diagnose" that is, to locate specific areas of weakness strength, and to determine the nature of weaknesses of deficiencies, it yields measures of the components or sub-parts of some larger body of information or skill. Diagnostic achievement tests are most commonly prepared for the skill subjects--reading, arithmetic, spelling.

**Factor:** In mental measurement, a hypothetical trait, ability, or component of ability, that underlies and influences performance on two or more tests, and hence causes scores on the tests to be correlated. The term "factor": strictly refers to a theoretical variable, derived by a process of factor analysis, from a table of intercorrelations among tests; but it is also commonly used to denote the psychological interpretation given to the variable--i.e., the mental trait assumed to be represented by the variable as verbal ability, numerical ability, etc.

**Grade Equivalent:** The grade level for which a given score is the real or estimated average.

**Group Test:** A test that may be administered to a number of individuals at the same time by one examiner.

**Individual Test:** A test that can be administered to only one person at a time.

**Inventory Test:** As applied to achievement tests, a test that attempts to cover rather thoroughly some relatively small unit of specific instruction or training. The purpose of an inventory test, as the name suggests, is more in the nature of a "stock-taking" of an individual's knowledge or skill than an effort to measure in the usual sense. The term sometimes denotes a type of test used to measure achievement status prior to instruction.

**Item:** A single question or exercise in a test.

**Item Analysis:** The process of evaluating single test items by any of several methods. It usually involves determining the difficulty value and the discriminating power of the item, and often its correlation with some criterion.

**Machine-Scorable (machine-scored) Test:** A test that may be scored by means of a machine. In taking tests that are to be scored on this machine, the examinee records his answers on separate answer sheets with a special electrographic pencil. These pencil marks are electrically conductive, and current flowing through them may be read on a suitably calibrated dial as a test score.

**Median:** The middle score in a distribution; the 50th percentile; the point that divides the group into two equal parts. Half of the group of scores fall below the median and half above it.

**Mental Age (MA) :** The age for which a given score on an intelligence test is average or normal. If a score of 55 on an intelligence test corresponds to a mental age of 6 years, 10 months, then 55 is presumably the average score that would be made by an unselected group of children 6 years, 10 months of age.

**Mode:** The score or value that occurs most frequently in a distribution.

**N.** The symbol commonly used to represent the number of cases in a distribution, study, etc.

**Normal Distribution:** A distribution of scores or measures that in graphic form has a distinctive bell-shaped appearance. In a normal distribution, scores or measures are distributed symmetrically about the mean, with as many cases at various distances above the mean as at equal distances below it, and with cases concentrated near the average and decreasing in frequency the further one departs from the average, according to a precise mathematical equation.

**Norms:** Statistics that describe the test performance of specified groups, such as pupils of various ages or grades in the standardization group for a test. Norms are often assumed to be representative of some larger population, as of pupils in the country as a whole. Norms are descriptive of average or typical performance; they are not to be regarded as standards, or as desirable level of attainment. Grade, age, and percentile are the most common types of norms.

**Objective Test:** A test in the scoring of which there is no possibility of difference of opinion among scorers as to whether responses are to be scored right or wrong. It is contrasted with a "subjective" test--e.g., the usual essay examination to which different scorers may assign different scores, ratings, or grades.

**Percentile (P) :** A point (score) in a distribution below which falls the percent of cases indicated by the given percentile. Thus the 15th percentile denotes the score point below which 15 percent of the scores fall. "Percentile" has nothing to do with the percent of correct answers

an examinee has on a test.

**Percentile Rank:** The per cent of scores in a distribution equal to or lower than the score corresponding to the given rank.

**Performance Test:** As contrasted with paper-and-pencil test, a test requiring motor or manual response on the examinee's concrete equipment or materials. Cornell-Coxe Performance Ability Scale, Arthur Point Scale of Performance Tests, and Bennett Hand-Tool Dexterity Test are performance tests in this sense. "Performance test" is also used in another sense, to denote a test that is actually a work-sample, and in this sense it may include paper-and-pencil tests, as, for example, a test in accountancy, or in taking shorthand, or in proofreading, where no materials other than paper and pencil may be required, but where the test response is identical with the behavior about which information is desired.

**Power Test:** A test intended to measure level of performance rather than speed of response; hence one in which there is either no time limit or a very generous one.

**Profile:** A graphic representation of the result on several tests, for either an individual or a group, when the results have been expressed in some uniform or comparable terms. This method of presentation permits easy identification of areas of strength or weakness.

**Prognosis (prognostic) Test:** A test used to predict future success or failure in a specific subject or field.

**Random Sample:** A sample of the members of a population drawn in such a way that every member of the population has an equal chance of being included--that is, drawn in a way that precludes the operation of bias in selection.

**Range:** The difference between the lowest and highest scores obtained on a test by some group.

**Raw Score:** The first quantitative result obtained in scoring a test. Usually the number of right answers, number right minus some fraction of number wrong, time required for performance, number of errors, or similar direct, unconverted, uninterpreted measure.

**Readiness Test:** A test that measures the extent to which an individual has achieved a degree of maturity of acquired certain skills or information needed for undertaking successfully some new learning activity. Thus a reading readiness test indicates the extent to which a child has reached a developmental stage where he may profitably begin a formal instructional program in reading.

**Reliability:** The extent to which a test is consistent in measuring whatever it does measure; dependability, stability, relative freedom from errors of measurement.



**Representative Sample:** A sample that corresponds to or matches the population of which it is a sample with respect to characteristics important for the purposes under investigation --e.g., in an achievement test norm sample, proportion of pupils from each state, from various regions, from segregated and non-segregated schools, etc.

**Scholastic Aptitude:** See Academic Aptitude

**Standard Deviation (S.D.):** A measure of the variability or dispersion of a set of scores. The more the scores cluster around the mean, the smaller the standard deviation.

**Standard Error (S.E.):** An estimate of the magnitude of the "error of measurement" in a score--that is, the amount by which an obtained score differs from a hypothetical true score. The standard error is an amount such that in about two thirds of the cases the obtained score would not differ by more than one standard error from the true score.

**Standard Score:** A general term referring to any of a variety of transformed scores, in terms of which raw scores may be expressed for reasons of convenience, comparability, ease of interpretation, etc.

The simplest type of standard score is that which expresses the deviation of an individual's raw score from the average score of his group in relation to the standard deviation of the scores of the group. Thus:

$$\text{Standard score (z)} = \frac{\text{raw score (X)} - \text{mean (M)}}{\text{standard deviation (S.D.)}}$$

By multiplying this ratio by a suitable constant and by adding or subtracting another constant, standard scores having any desired mean and standard deviation may be obtained. Such standard scores do not affect the relative standing of the individuals in the group nor change the shape of the original distribution.

**Standardized Test (standard test):** A systematic sample of performance obtained under prescribed conditions, scored according to definite rules, and capable of evaluation by reference to normative information. Some writers restrict the term to tests having the above properties, whose items have been experimentally evaluated, and/or for which evidences of validity and reliability are provided.

**Stanine:** One of the steps in a nine-point scale of normalized standard scores. The stanine (short for standard-nine) scale has values from 1 to 9, with a mean of 5, and a standard deviation of 2.

**Survey Test:** A test that measures general achievement in a given subject or area, usually with the connotation that the test is intended to measure group status, rather than to yield precise measures of individuals.

**True Score:** A score entirely free of errors of measurement. True scores are hypothetical values never obtained by testing, which always involves some measurement error. A true score is sometimes defined as the average score of an infinite series of measurements with the same or exactly equivalent tests, assuming no practice effect or change in the examinee during the testings.

Validity: The extent to which a test does the job for which it is used. Validity, thus defined, has different connotations for various kinds of tests and, accordingly, different kinds of validity evidence are appropriate for them. For example:

1. The validity of an achievement test is the extent to which the content of the test represents a balanced and adequate sampling of the outcomes (knowledge, skills, etc.) of the course or instructional program it is intended to cover (content fact, or curricular validity).
2. The validity of an aptitude, prognostic, or readiness test is the extent to which it accurately indicates future learning success in the area for which it is used as a predictor (predictive validity).



### Non-Standardized Devices For Collecting Information

At those times when a teacher wishes to measure the degree to which a child has been able to understand the various concepts of coursework material, she constructs "tests" as a device for measurement. So too, devices can be constructed to sample a child's concepts of social and emotional experiences.

Necessary for effective use, however, is the understanding that just as with a test of intellectual functioning these devices are nothing more or less than a sample. The sample is subject to any number of variables; hence, is always tentative. It is meant only to provide data for the teacher to extend her knowledge base about a child....at a given time. Children are constantly at the task of validating a concept of self, of a physical world, and of a social world. A child's written statements, then, should represent his immediate views regarding himself and his world.

As with other kinds of interaction between teacher and pupil, consideration need be given the kind of relationship that exists between them. A child must understand that the purpose behind the task is to "let my teacher better understand me and how I feel about things." The exercise arises out of this genuine interest.

The diagnostic activities listed here are just a few of the many that are available to the teacher. The creative teacher will think of many more. He must keep in mind one basic fact- the child is constantly expressing his needs, strivings, and conflict in one form or another. To make sense of this behavior, one must learn to observe, listen, and analyze. Behavior must be understood before effective, positive action can be initiated.

The purposes and advantages for gathering information by use of non-standardized devices are:

1. The chief purpose of these informal techniques, as with all evaluative techniques, is to gain clues or insights into causes of pupil behavior.

2. Their unique purpose is to gather information about pupil's attitudes, feelings, and values that is difficult to obtain by use of observation or testing methods.
3. Some of these techniques are especially good for getting pupils to express matters of a personal nature which they would be reticent to reveal through direct questions.
4. The information obtained is useful as supplementary data which teachers and counselors may use to help verify or discount other, more objective, data.
5. The information obtained is useful as a basis for conferences with pupils and their parents.
6. Most of these techniques are suited for use with groups, making it possible to gather a considerable amount of information in a short time.
7. Sometimes self-expression techniques serve a purpose other than that of evaluation. For some children, expressing themselves freely about their problems or worries acts as a catharsis, relieving them of pent-up emotional tensions.

The cautions and disadvantages for gathering information by use of non-standardized devices are:

1. Many data obtained by these techniques are not valid and reliable by themselves. When used as corroborative data with the results from more objective measurements they become more valuable. Validity and reliability are also improved if information from several of the informal self-expression or observation techniques is pooled.
2. It is difficult, if not impossible, to interpret self-expressive data without the interpreter projecting his own background of experiences into his interpretation.

3. Many data resulting from the use of these techniques are difficult to interpret in the absence of special training. Even psychologists with special training are cautious about jumping to conclusions on the basis of isolated bits of information.
4. Teachers without special training in psychology should use these techniques only if they are thoroughly aware of the limitations suggested above.

#### Types of Non-Standardized Devices

Some of the more conventional non-standardized devices are described on the following pages. These methods should not be employed unless they can be used to strengthen the assessment function.

Structured Autobiographies - One of the most helpful devices that can be used to gain additional understanding is the structured autobiography. The following suggestions are offered to aid the teacher: (1) This exercise will be meaningless unless there is a feeling of mutual trust between teacher and student. Pupil will share their feelings if they are confident that they are sharing only with their teacher. (2) This exercise is limited by the student's capacity for written communication, hence, is more suited to intermediate, junior and senior high. (3) Pupils get bored by having to write their life stories nearly every year. The school staff should plan the grade levels at which they are to be written. (4) If free expression of feelings and attitudes is the desired result, do not (for this assignment) place emphasis upon the mechanical aspects of writing.

Almy<sup>2</sup> has suggested a few items which may be used as topics for structured autobiographies: "Before I Started to School", "When I First Went to School", "School Experiences", "Summer Vacations", "The Most Interesting Thing So Far", "Troubles I Have Had", "Personal Interests", "Companions".

<sup>2</sup>Millie Almy, Ways of Studying Children, (New York: Bureau of Publications, Teachers College, Columbia University, 1959), pp. 140-41.

Compositions - Theme writing provides the child with an opportunity to express his attitudes and feelings about a great variety of things. If the teacher has good relationships with all of the children in the classroom, they will grasp at the opportunity to share their hopes, joys, aspirations, and even conflicts through the avenue of writing.

There is, of course, an infinite variety of topics about which teachers can ask children to write. When this type of activity is initiated, however, it is wise to select "safe" topics that do not arouse the defensiveness of the troubled child. For example, the teacher can have the children write about various phases of classroom or school life, their interests or hobbies, or things they like to do with their friends or at home.

If the teacher is assured of his rapport with the class, he can suggest more intimate or confidential topics. For instance, after a particularly disturbing classroom incident, he might have the children write a theme about it. He can ask the children to describe the incident, what might be the causes of the incident, and how each felt about it. Similarly, the teacher can have the children write about topics such as: "Things That Happen at School That Bother Me", "Things I Like About School", "The Ideal Teacher", "My Favorite Classroom Friends", and "My Most Embarrassing Moment at School".<sup>3</sup>

Fiction And General Readers - From the first grade on, children are subjected to several kinds of general readers. Most readers describe people or animals in various situations or relationships. Therefore, reading activities provide excellent opportunities for one to discover how a child

<sup>3</sup>These suggestions were obtained from  
Blackham, G. J., The Deviant Child In The Classroom, Wadsworth



feels about certain types of relationships and events. A teacher can use almost any story about an animal or a person to learn: (1) The child's interpretation of the motivation of the characters in the story and why each person probably did what he did. (2) The traits or actions of the characters in the story the child likes or dislikes most. (3) The child's ideas about how the central character or characters in conflict situations might have behaved differently for more favorable results. (4) The person or animal in the story the child would like to be and why. (5) How, according to the child, each character in the story probably felt and why he felt that way.<sup>4</sup>

If the teacher is careful to question the child on these major points, he is able to get some understanding of the child's motivation, the kinds of people he likes and dislikes, his feelings about authority figures, and his self concept.

Drawings - Young elementary school children may not be able to use themes as a means of expressing themselves because of their limited ability to write. Their drawings, however, can often be used as themes. The basic procedure is to have the child draw a picture about a person, situation, or event that will express his feelings in an area about which the teacher desires information. After the picture is drawn, the teacher asks the child to tell a story about it, describing how each person feels. The teacher may make this a project for class discussion or have each child tell his story in private.<sup>5</sup>

The subject of the picture or the type of picture the teacher asks the child to draw will depend upon the purpose he wishes the activity to serve. If the teacher wishes to learn more about the family circumstances of the child he might ask him to draw a picture of the family home and then describe the people who live in the house, what they like to do, what makes them happy or sad, and how they get along together.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.



Sociometry - Sociometry is concerned with the measurement of interpersonal preferences among the members of a group in reference to a stated criterion. The whole field of sociometry, however, is multi-dimensional in the sense that it includes not only measurement techniques but also methods and principles to be followed in making groups more effective in pursuit of their goals and more personally satisfying to their members. It cannot be assumed that a sociometric test necessarily measures popularity since much depends upon particular choice-criterion utilized.

Some of the assumptions underlying the field of sociometry are: (1) Within any formal organization there is an informal organization based on interpersonal attractions and repulsions, and that these informal relationships greatly affect the official functioning of the group. (2) Interpersonal bonds between members of a group are necessary to good morale and to the normal personality growth of each individual. (3) Man is a social as well as a biological being and, therefore, has basic needs for many associations with others and for reciprocation of positive feelings.

Several types of sociometric techniques can be employed: (1) Specific Choice Criteria - In utilizing a specific criterion of choice, a teacher asks the pupils to respond to a question which is pertinent to a need in a particular class. Examples: "Which other pupils in this class would you prefer to work with in our art project?" "...in forming discussion groups for our social studies?" "...in putting on a one act play?" At other times criteria of a much more personal nature may be used, such as: "Which other pupils would you like to sit by?" "Which ones do you prefer to have in your play group during play period or noon hour?"

In all the above questions, the pupils are not asked to list the names of other children with whom they now associate, work with, or play with, but rather the ones whom they would like or prefer to have as an associate or partner. Thus what is measured is not necessarily social facts but social

aspirations. This is desirable since the major value of sociometric data lies in their use for changing interpersonal alignments to bring about more satisfying relationships. If the teacher **is going** to help various pupils in his class, he needs to know not what now exists, but what the pupils would like to have exist. The questions should deal with matters that can be acted upon to make changes in the social arrangements of the group. (2) Questionnaires and Rating Instruments - Questionnaires and rating instruments are designed to allow the members of a group to indicate their feelings toward each other but not in reference to a specific criterion. There is not necessarily any expectation that some group changes will result from the testing. Usually sociometric questionnaires are concerned primarily with measuring interpersonal feelings, as opposed to leadership qualities or desirability as work associates.

A typical example of such a questionnaire is found in the Ohio Social Acceptance Scale, which consists of the following six headings: (1) My very, very best friends, (2) My other friends. (3) Not friends, but okay. (4) Don't know them. (5) Don't care for them. (6) Dislike them. Every pupil taking this questionnaire is given a list of the names of all his classmates and is asked to put a number opposite each child's name to indicate his degree of positive, neutral, or negative feelings toward him. This is obviously a very comprehensive measurement since every child responds to every other child in his class. From such data a teacher can be confident that he has a reliable index to the way his pupils regard each other at the time of measurement.

(3) Measures of reputation - A measure of reputation is not, strictly speaking, a sociometric test since no choices or preferences are given. Each member of a group renders judgments in regard to the personal traits or behavior characteristics of his group associates.

An example of a reputation measurement is found in the Ohio Recognition Scale -- "Who's Who In My Group." Three items from this scale are:

1. Do we have any boys and girls in our room who are very even-tempered, who almost never get upset or angry, who are always calm, even when things go wrong? When somebody shouts at them, or even hits them, they don't get excited. They are always cool and level-headed. Who are they?
2. There are some boys and girls who are always grumbling and making excuses when things don't go right. They can't take a joke and they become angry if anyone criticizes them. They hate to lose and always blame other people if the game isn't going well. Do we have any children like that in our room? Who are they?
3. There are some children who are strong enough to win fights but they don't pick fights. They don't go around teasing and hitting people. They stop 'bullies' from hitting and teasing smaller children. They want everyone to have a square deal. Do we have any children like that? Who are they?

### Diagnostic Parent Interview

The use of interviews as a source of data requires, first, some consideration as to the characteristics of a DIAGNOSTIC interview. Success would seem to hinge on the consideration given three major areas: People, Purpose, and Planning.

The comfort of the person being interviewed has everything to do with the degree of involvement that can be devoted to the problem at hand. The parent who is able to discern that the interview is being conducted in the genuine interest of the child rather than to be judged, censured, criticized or condemned is much more willing to invest time and thought to exploration of needs. By the same token the comfort of the teacher doing the interviewing will set the tone or climate of the conference. This comfort is most easily achieved through an understanding of the various forms of defensiveness and apprehension most parents have when asked to talk about their children.

The teacher needs to establish and be able to articulate a clearly defined purpose for asking for the interview. Most often this can quite realistically be something to the effect, "I'd like your help in understanding your child. In this way I might better be able to assist him.".. or "Perhaps you can help me find better ways to help your child with\_\_\_\_\_".

Planning takes the form of being able to identify those areas about the child where additional data is needed and then forming questions that will assist the parent in focusing on those particular areas. The structure of the questions must be such that they are not a judgment. ("Why do you think he is so poor in arithmetic?"); a criticism...("Does he get in as much trouble at home as he does at school?"); or an attack...("You seem to have a great deal of trouble with discipline, don't you?").



The following questions might be helpful for use as guides to specific kinds of information.

## I. School History...Child's reaction to school.

1. How does he feel about school this year?
2. Is this consistent with former years?
3. Which was his best year? worst year?
4. In which subject does he experience the most success?  
least success?
5. Has he changed schools often?
6. What kinds of activities seem to capture his interest?

Possible implicit data?

- How well the parent "knows" the child.
- How the parent perceives the child's school experience.
- Possibility of finding out the nature of the best liked  
or worst liked teacher.
- The kinds and extent of communication between parent and child.

## II. Developmental History

### 1. Social development

- a. Does he seem to be able to make friends easily? what ages?
- b. What kinds of recreational activities does he enjoy most?
- c. What kinds of play activities does he get involved in?
- d. What roles does he take in peer group games?
- e. Are there quite a number of children in the neighborhood  
with whom he could play?
- f. What kind of person is his "best" friend?

Possible implicit data:

- Degree to which the parent restricts the child's social world.
- Degree to which the child is able to establish appropriate  
sex role.
- Nature of the person with whom the child identifies.

### 2. Emotional development

- a. Is your child affectionate?
- b. Does he demand a great deal of your attention?
- c. What kinds of things seem to upset him the most?
- d. Is he happy most of the time?
- e. What kinds of situations is he afraid of?
- f. Does he seem comfortable when meeting new people?
- g. How does he express his satisfaction or dissatisfaction  
about the activities he is involved in with peers?

Possible implicit data:

- Extent to which the child is dependent.
- Extent to which the child has established self control.
- Manner in which the child is able to manipulate others.



### III. Parent-Child Relationships

1. How many brothers and sisters does he have?
2. How are they alike or different from one another?
3. What things does he enjoy doing with the family?
4. With whom does he do the most things?
5. What do you enjoy most about the child?
6. What have you found to be the most difficult part of raising him?
7. What have you found to be the most effective method of discipline with him?
8. What would you like him to be when he grows up?

Possible implicit data:

- The degree of unity in the family.
- The amount of pressure for conformity.
- Parental expectations (desirable and undesirable behavior)
- System of rewards and punishment (child rearing philosophy)
- Child's identity figure within the family.

This information gained from the Diagnostic Parent Interview should be recorded on a convenient form. An example of an appropriate form is included in Appendix E.

#### Personal Interview With A Child

Interviews with children would seem to take two basic forms. The first type would be a spontaneous kind of interaction between the teacher and child in which the teacher is asking for elaboration or clarification of an idea the child is attempting to express. The second would be a more formal, structured kind of interview where the teacher directs the attention of the child on a particular problem or event.

Notable in either case are the inherent aspects of the social relationship. The attitude of the teacher toward the child is critical. If she is severely critical or bent on censure, it would compound any difficulty the child might be having in articulating his ideas. The attitude of the child toward the teacher is also critical. If the child thinks the teacher is a person to fear, it would make little difference how the teacher intended to be regarded.

In either kind of interview, the teacher might pose questions that by design would sample a child's intellectual functioning or a concept of social relationships. When the question suggests that the child 'compare' or 'elaborate' or 'clarify' or 'apply', the outcome will reveal the child's capacity to generalize or discriminate aspects of the learning experience. If the question suggests 'anticipated outcomes' or an 'alternate approach' or 'need for more information', the outcomes would be in the realm of problem identification and problem solving.

Other questions might deal with a child's capacity for identifying emotional reactions, interpreting social behavior, and insight into his own problems. "What aspect of the event has made you so mad?", acknowledges emotional involvement and focuses on analysis. "Let's talk about what happened" suggests interest in behavioral cause and effect and opens doors to exploration of "What do you think might have happened if...?" In this way the child is being asked to develop or crystalize some concepts of social and emotional relationships.

### The Cumulative Folder

The Cumulative Folder provides a composite data source for learning about and understanding each student. Great care must be exercised that records are not used to subtly derogate a person. To label may be to force a pupil into a life-long role of lesser satisfaction than that which he might properly have assumed.

The contents of the Folder should be determined on the basis of the following criteria:

1. Is the information needed in terms of the guidance and instructional program objectives?
2. If the information will be needed, who will use it?
3. Is the information usable in terms meaningful to the staff?
4. Have adequate procedures been designed for gathering objective data, storing it, and yet making it available for use?

### Contents

The Cumulative Folder shall include:

1. A Secondary Permanent Record Card which includes identification data, secondary school subject grades, attendance data, secondary school standardized test data, home and family information, special services referral information (begins at grade 7).
2. An Elementary Record Card (See Appendix A for example) which includes identification data, home and family information and special services referral information (discarded at end of grade 7).
3. A Composite Anecdotal Report (Included in Elementary Record card, see Appendix A for example) which is a condensation of the teacher's Data Work Sheet (Cognition, Social-Emotional, and Physical and Neuromuscular) as well as significant parent interview data.

4. A Test Profile Card (See Appendix B for example) which includes all standardized test data.
5. A Physical Health Information Card (See Appendix C for example) which includes home and family information collected by the school nurse and the Physical Education consultant.
6. A Reading Progress Record, which denotes the basal and supplementary reading materials that the student has completed.

The following materials are used by the student's current teacher and are transmitted to the student's subsequent teacher. At the conclusion of that year, the material is destroyed.

7. A Teacher's Data Work Sheet, (See Appendix D for example) which is a detailed report of the Cognitive, Social-Emotional and Physical and Neuromuscular Development compiled at the preceding grade level.
8. A Parent Interview Sheet, (See Appendix E for example) which records the proceedings and relevant outcomes of the parent conferences conducted during the year.
9. A Diagnostic Reading Analysis Sheet, which includes results obtained from an Informal Reading Inventory and the basal text reading test.

#### Responsibility for Maintenance

During grades K-6, the classroom teacher has the responsibility for maintaining the Cumulative Folder. At the conclusion of the sixth grade, the Folder is transferred to the appropriate junior high school. The junior high school principal and counselor shall select a home room teacher-advisor for each student. This teacher-advisor shall have the responsibility of maintaining the Folder through grades 7-9. Contact with the student's



teachers during these three years is an inherent responsibility of the junior high school teacher-advisor. The school counselor should maintain a class liaison with the teacher-advisor so that relevant data is recorded and utilized. At the completion of Grade 9, the Cumulative Folder is transferred to the High School Principal and Director of Guidance. At grade 10, a homeroom teacher-advisor is assigned to follow the student through grade 12.

In selecting teacher-advisors, principals and counselors should take cognizance of student needs and teacher-advisor style. Assignments should be modified when a compatible relationship cannot be established.

#### Disposition Of Records

In the event a student transfers to another school, the entire contents of the Cumulative Folder (with the exception of the Student Permanent Card) is sent to the transferee's new school. The Cumulative Folder will be discarded (one) year after a student graduates from high school. In the event a student withdraws from high school before completion, the Cumulative Folder will be retained for a period of (four) years.

#### Information Concerning Incoming Students

The counselor shall have the responsibility for developing a cumulative folder for each student. Data sources will be; Diagnostic Interview (having the parent "interpret" the child to school personnel in terms of intellectual, social-emotional and physical-neuromuscular development); personal interview with the child; records from schools previously attended and previous school personnel (where feasible.)



## CHAPTER IV

## Implementation Plan

As the project unfolded, it became increasingly apparent that success depended on the degree to which the recommendations were carried out in the classroom.

To make the project findings meaningful and useful to school personnel, a careful plan for implementation had to be conceived. The problems were threefold:

1. To provide a way to communicate project goals and conclusions to all teachers.
2. To provide for direct application of committee work through well-defined pilot programs.
3. To provide in-service opportunities to assure continuity of project philosophy.

With these ideas in mind, the implementation committee developed the plan that follows, in order to focus more effectively on each child through his classroom teacher.

Action Phases

From the base of a well-defined philosophy developed by the Instructional Objectives Committee came a frame of reference for developing more effective methods of assessing and evaluating children. The Testing Committee worked in the area of standardized data, and the Committee for Data Collection developed guidelines for critical observation in the three domains. Greater teacher awareness of the needs of individual children would become the logical outcome of such efforts.

Through the use of the document and concerted action in the area of public relation programs, in-service training for teachers, and experimental projects, the Implementation Committee saw themselves as providing direction toward reaching the ultimate goal of a truly child-centered school.

### Orientation

#### Administration Meetings

In an early September meeting, the Curriculum Director of the Olympia Public Schools will present a brief report which will provide focus for study sessions during the 1967-68 school year at the administrative level.

#### Faculty Meetings

During the pre-school faculty meetings the building counselor and committee members will be responsible for reporting on the summer SSEII project.

Early in the year, when the document is released to all teachers, it is recommended that a committee member outside the staff be invited to a faculty meeting to stimulate interest and provide a climate for implementing the philosophy of the document.

### General Structure of Pilot Program

The Implementation Committee recommended that Roosevelt and Leland P. Brown Elementary Schools participate in a pilot program starting September, 1967, outlined as follows:

#### I. Statement of Purpose

To provide an opportunity for the practical application of the conclusions of the project committee.

## II. Methods of Implementation

### A. Building Faculty Meetings

1. To provide a climate which would encourage flexible, child-centered instruction.
2. To clarify and instruct teachers in the use of evaluative techniques (test results, observation techniques, cumulative folders.)
3. To explore experiences and set up positive constructs.
4. To make district specialists available as problems arise and information is needed.
5. To provide for small group study sessions as the need arises (principal, psychologist, counselors as facilitators.)
6. To introduce current information from literature, periodicals, tapes and films which will be available in the building to the teachers.

### B. Community Awareness

1. Parent-Teacher Association programs.
2. Publicity

## III. Evaluation of the Pilot Program

### A. Counselor in the building

1. Keep diary of pertinent information throughout the school year.
2. Informal interviews during school year with each participating staff member. Results shall be written, noting specific areas of question.

### B. Counselors outside pilot school

1. Informal interview with participating staff toward the end of the school year.
2. Prepare summary for a total evaluation meeting.

C. Evaluation meeting at end of the year including

1. Curriculum Director.
2. Principals involved
3. Psychologists.
4. Counselors
5. SSEII long-standing committee or delegates.

The conclusions of this evaluation should provide recommendations and direction for further action.

Operational Framework For Faculty Meetings

I. Series of discussion starters

A. School's role in the twentieth century

1. Relationship of cognitive, social-emotional, physical-neuromuscular domains.
  - a. Use of leisure time.
  - b. Economic dependence.
  - c. Sub-cultures.
  - d. Family relationships.
  - e. Preparation for change.

B. Educational lag

1. Identification of deficits in domains as applied to a-e above.
2. Examination of value system relative to change.

C. Focus on innovation

1. Effective assessment of individual differences.
  - a. Critical observation.
  - b. Standardized test.
  - c. Non-standardized test.

2. Meeting individual needs through practice.
  - a. Developmental approach to teaching.
  - b. Flexible school and classroom organization.
  - c. Research into practice.
3. Providing climate for experimentation.
  - a. Administration sanction, approval, and support.
  - b. Availability and utilization of materials.

Recommendations: Minimum full staff meetings within each pilot building. Two meetings per month--one released time in a.m. (negotiation by OEA) and other one after school, early dismissal. Under leadership of principal and chosen team.

#### Public Relations

Recognizing the importance of an informed school board, it will be the responsibility of the Curriculum Director to make regular progress reports to that group.

Recognizing the necessity of informing parents of innovation in Olympia Schools, P.T.A. programs and parent discussion groups should be utilized. The Implementation Committee will serve as resource people to carry this out.

Recognizing the impact of each teacher's public relations when conferencing with parents, it is recommended that counselors provide leadership for study sessions to improve conferencing techniques and goals.

#### A Standing Implementation Committee

The present Implementation Committee, with the addition of the Curriculum Director of the Olympia Public Schools as an exofficio member, should remain intact as a standing committee through the 1967-68 school year.



### Purpose

1. To communicate closely with the two pilot programs to determine direction for further implementation in specific or general areas now or in the future, as the need is observed in these schools..
2. To coordinate the suggestions of the summer project committee as they work in their various buildings and uncover problem areas.
3. To keep administration aware and well informed as to the direction and extent of progress in all of the implementation areas.
4. To elicit the active support of administration and/or other resources to facilitate innovations in classroom instruction, in-service training, school organization, etc., in keeping with the precepts outlined by the document in the three domains.

### Meetings

1. Breakfast meetings should be held on a monthly basis.
2. Every third meeting should be a meeting of the total project committee.
3. Additional meetings should be called by the chairman at his discretion, or at the request of any member of the committee as a whole.
4. Decisions as to the future of the committee should be made by the committee as a whole in June of 1968. It is hoped that as soon as possible, other related committees of the OEA, curriculum department, administration, etc., adjusting to the specifications of the Project Committee would eliminate the need for a special Implementation Committee.

## CHAPTER V

## EVALUATION OF WORKSHOP

Two types of evaluations were employed to assess the value of the workshop. District participants were asked to respond in writing to three questions:

1. If you feel that this workshop assisted in your professional growth, please state how. If you feel it did not, please state why.
2. If you feel that your perception of the process of individualization of instruction has changed, please describe the change.
3. Please comment on your feelings about the manner in which the workshop progressed throughout the four weeks. As part of your answer, please state whether you think the output of the large group was greater than or less than, your initial expectations.

In response to question #1, eleven participants remarked that they had acquired additional information or new learning. In fact, four stated that this was the best 'college course' that they had ever taken. Other frequent responses were: seven comments included experiencing interpersonal relations and group process; six mentioned the value of testing out new ideas and three valued new understanding of other disciplines.

Fourteen participants indicated that the meaning of individualizing instruction had been broadened significantly. Two participants expressed the new insights gained about the inter-relationships of the three domains.

Seventeen participants indicated that final results were good to excellent. Several indicated that though the final product was very good more could have been accomplished if we could have rearranged the order of the consultants and/or could have had a more organized beginning.

The second type of evaluation used was subjective statements by the consultants. In summary, Drs. Blackham, Anderson and McDougall stated:

1. The composition of the group was excellent.
2. The movement towards a more child-centered educational program was in evidence.
3. Because of the magnitude of the project, it is essential that the group continue through the year, and,
4. The group systematically attacked their elusive target. Their goals deserve recognition of the highest order.

(The complete texts of the statements appear in the Appendix F, G and H.)

## CHAPTER VI

## PERSPECTIVES - ONE YEAR LATER

Two schools were selected as targets for implementation. Each principal will report briefly on what has transpired during the year of implementation. In addition, the school district curriculum director will share his perceptions about activities in the two target schools and the district as a whole.

The Director of Curriculum Speaks

"The Summer Committee was unable to complete the task in the allotted time. As a result, several members devoted many hours towards completing the final report. The plans of the implementation committee had to be altered substantially.

The efforts of the committee seem to have brought about the following movements:

1. An emphasis on perceptual motor training in one of the target schools. The teachers in that particular school have made good use of the observation guide (physical-neuromuscular division.) This emphasis has also created an interest in the use of Frostig materials to enhance neuromuscular development.
2. The educational objectives section has had a subtle impact in all of the schools. Because of the broad representation on the committee, an effective link was established with all schools as well as all types of personnel. Impact seemed to be greatest in terms of establishing a positive school climate. To a lesser extent, all schools began to focus on curricular possibilities for development in the three domains - cognitive, social-emotional and physical neuromuscular. To credit all of this movement to

the efforts of the committee would not be justifiable; but certainly the committee members were able to give impetus to any curricular change movements.

Some of the more significant curricular results have been:

1. The introduction of the Hilda Taba Social Studies in one elementary school.
2. The introduction of the Fenton Social Studies program in the junior high school.
3. The implementation of a strong mental health unit in the elementary schools.
4. The introduction of some of the skills associated with the self-enhancing education program (Mary Randolph, Cupertino Schools, California.)
5. The introduction of some inductive science programs in the elementary schools (ESI and AAAS); and,
6. Experimentation with multi-age grouping in the elementary schools.

Elementary counselors have been instrumental in improving the "conferencing" techniques! Several schools conducted a diagnostic conference in the fall. In the spring, they again met with individual parents -- this time in a reporting role.

Dr. Garth Blackham was selected to serve as a group facilitator and resource person for a three day discussion session with elementary and secondary school principals. Though the discussion sessions did not focus directly on the work of the summer committee, the dialogue was structured to deal with similar problems.

The program is far from being fully implemented. Principals and other administrators have not had proper exposure to the material developed. This should be a major objective for the 1968-69 school year.



### The Leland P. Brown Elementary Principal Speaks

Faculty study sessions were organized at the beginning of the school year, and at this time teachers who had been in attendance at the SSEII summer project discussed with the other teachers the objectives and philosophy of this program and also presented them with some of the written information that had been done this summer. At this time the philosophy of the SSEII and the objectives of the individualization program were presented. Also discussed in the beginning and preceding faculty sessions were ways that the objectives and philosophy could be applied to an elementary school situation similar to ours.

After this was done and teachers toyed with the information in their various classes with their various students, we discussed in later sessions ways of improving our teaching to take advantage of the information and ideas that had been presented in the first study sessions. We talked about ways of improving our teaching and ways of improving our dealings with children in such a way that we could develop an atmosphere conducive to learning in our school.

Another objective that was carried out included changing the evaluation, reporting and recording methods for our students so we had a more comprehensive record of information available for our own use and for teacher's use in the following year.

We adopted new innovative curricular approaches to meet individual needs and are planning on using these innovative approaches in our curricular plans. The basic groundwork for these new methods was laid this year.

Next year we plan to use the Hilda Taba Social Studies Curriculum, the Gattegno Words In Color approach in reading followed by the SRA Basic Linguistics Series for our reading and language curriculum.

The Physical Education Director, together with the first grade teachers, began a program for the development of coordination skills. The children responded well and worked industriously to develop eye, hand and body coordination and dominance.

We used the new "Health Happenings" district health guide as a basis for our multi-age groupings as well as in regular class sessions. This enabled us to discuss and analyze children's problems in school, at home and in general. It also gave the teachers a definite feeling for students of different ages and classes.

We also plan to use the programmed kits in our spelling. Our upper grade reading will consist of the use of SRA Reading Laboratories followed by an individualized reading program for students in grades 4, 5, and 6.

Many of the teachers are working on and have developed ways of individualizing their math program, especially in the primary grades. This will continue to be improved though it does prove difficult in various aspects to individualize our mathematics program without a basic math text or guide that follows these objectives.

We also hope to develop our study of the surrounding community and environment through the use of an increased number of field trips, adapting the information gained into our ongoing curriculum.

We are developing and working toward an ongoing study and evaluation of the SSEII program and are hoping to be even more effective in meeting the individual needs of our children next year."

#### The Roosevelt Elementary Principal Speaks

"Our school of twenty-five teachers accepted the goal to develop improved ways to individualize teaching and evaluation of it in relation to the domains as identified in the philosophy.

Dozens of new ideas were tried throughout the year. Basically they involved three types:

A. Programs or systems initiated and their purposes

1. Frostig materials presented to all kindergarten and first grade teachers who learned to administer and utilize materials.
2. Hilda Taba Social Studies materials tried in one section of each grade, 1 - 6.
3. Interaction analysis training for six staff members to attempt to develop an awareness of their verbal teaching style and its usage in their teaching.

B. Inter-school cooperation and understanding between children and between teachers.

1. Ungraded one group of fourth, fifth and sixth graders two periods a week for discussion on timely issues.
2. Involved over forty students in working with one or more other students at an age level other than their own (both directions); special education with regular, fourth with first, sixth with kindergarten, etc.

C. Parent-school understandings of the individualized needs of children.

1. Planned regular days and times for parents of groups of special education children to serve as teacher aides depending on their abilities and interests.
2. Involved the majority of kindergarten parents on pre-assigned days and times as teacher aides.
3. Had six discussions or programs for parents on issues involving ways we were providing for individuals.

4. Individualized parent-teacher reporting by changing content of conference, type of kindergarten written report - and offered choice of type of report to parents at third reporting period.

These are a few of the ways in which our staff became involved in providing individual approaches and evaluation in all three domains."

APPENDIX A

ELEMENTARY RECORD CARD



## OLYMPIA PUBLIC SCHOOLS ELEMENTARY RECORD

Name \_\_\_\_\_ Address \_\_\_\_\_ Phone \_\_\_\_\_

Place of birth \_\_\_\_\_ Date of birth \_\_\_\_\_ Sex \_\_\_\_\_

Parent's (guardians) names \_\_\_\_\_ Address \_\_\_\_\_

Marital status: Married \_\_\_ Divorced \_\_\_ Death M \_\_\_ F \_\_\_ Remarried \_\_\_

Other adults in the home \_\_\_\_\_

Father's (guardian) occupation \_\_\_\_\_ Mother's (guardian) occupation \_\_\_\_\_

Number of older brothers \_\_\_\_\_ Number of younger brothers \_\_\_\_\_

Number of older sisters \_\_\_\_\_ Number of younger sisters \_\_\_\_\_

	1	2	3	4	5	6	7	8	9
Grade in School									
Date of completion of gr.									
Other schools attended									
Days present									
Days absent									
Spec. Serv. Referral									

TEACHER OBSERVATIONS

97

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 6

DATE

TEACHER  
SCHOOL

TEACHER OBSERVATIONS

98

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 5

DATE

TEACHER  
SCHOOL

TEACHER OBSERVATIONS

99

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 4

DATE

TEACHER  
SCHOOL

TEACHER OBSERVATIONS

100

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 3

DATE

TEACHER  
SCHOOL



## TEACHER OBSERVATIONS

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 2

DATE

TEACHER  
SCHOOL

## TEACHER OBSERVATIONS

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

GRADE 1

DATE

TEACHER  
SCHOOL

## TEACHER OBSERVATIONS

COGNITIVE

SOCIAL-EMOTIONAL

PHYSICAL AND NEUROMUSCULAR

KINDERGARTEN

DATE

TEACHER  
SCHOOL

APPENDIX B

TEST PROFILE CARD

TEST PROFILE CARD

Name \_\_\_\_\_ Birthdate \_\_\_\_\_

Grade 3 Large-Thorndike (Percentile Band)	Grade 3 STEP	Optional Test (Insert Gummed Label)
Date _____	Date _____	
Grade 6 Large-Thorndike (Verbal) (Percentile Band)	Grade 4 STEP	(Insert Gummed Label)
Date _____	Date _____	
Grade 6 Large-Thorndike (Non-Verbal) (Percentile Band)	Grade 5 STEP	(Insert Gummed Label)
Date _____	Date _____	
Grade 8 Differential Aptitude Test (Insert Gummed Label)	Grade 6 STEP	(Insert Gummed Label)
Date _____	Date _____	
Grade 1) SCAT (Insert Gummed Label)	Grade 7 STEP	(Insert Gummed Label)
Date _____	Date _____	
Other	Grade 8 STEP	(Insert Gummed Label)
	Date _____	
	Grade 9 STEP	(Insert Gummed Label)
	Date _____	



APPENDIX C

PHYSICAL HEALTH INFORMATION CARD

Phone \_\_\_\_\_

(7) Ears: \_\_\_\_\_ Date: \_\_\_\_\_

Auditory Level	$\frac{R}{L}$
Infections	
Draining	
Earaches	

**(8) Mouth:**

Present

[illegible]

T & A	Other
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
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95	95
96	96
97	97
98	98
99	99
100	100

(10) Nutrition:

Acuity (Snellen @ 20ft. R  
L

Color Blindness

---

Muscle Control

---

Infections or Diseases

Obesity  
Allergies  
Anemia  
Eating Habits



APPENDIX D

TEACHER'S DATA WORK SHEET

COGNITION  
DATA WORK SHEET

NAME \_\_\_\_\_

AGE \_\_\_\_\_

PHONE \_\_\_\_\_

OPERATIONAL DATA

PRESCRIPTION ATTEMPTS AND RESULTS

I. Initiating Responses

II. Acquiring Information

III. Understanding Experiences or Events

IV. Solving Problems

V. Introduces New Ideas



SOCIAL-EMOTIONAL DEVELOPMENT  
DATA WORK SHEET

OPERATIONAL DATA

PRESCRIPTION ATTEMPTS AND RESULTS

I. Identification Models

II. Concept of Self

III. Roles in Social Interaction

IV. Attitude Toward Environment

PHYSICAL AND NEUROMUSCULAR DEVELOPMENT  
DATA WORK SHEET

OPERATIONAL DATA

PRESCRIPTION ATTEMPTS AND RESULTS

I. General Health

II. Biological-Physiological Development

# LEARNING EFFICIENCY DATA WORKSHEET

113

Name \_\_\_\_\_

Grade \_\_\_\_\_

	LEARNING DIS.			LEARNING STR.		Comments
	Very Weak	Weak	Average	Strong	Very Strong	
<b>PHYSICAL-NEUROMUSCULAR DEVELOPMENT</b>	0	5	25	75	95	100
I. General Health						
Sensory Modes						
Physical Fitness						
Environmental Factors						
Safety Awareness						
Personal Hygiene						
II. Biological-Physiological Dev.						
Proportionate Growth						
Sequential Neuromuscular Dev.						
Fundamental Skills Acq.						
Refinement of Control						
High Order Development						
<b>SOCIAL-EMOTIONAL DEVELOPMENT</b>						
I. Identification Models						
Adults						
Peers						
II. Concept of Self						
Statements about Performance						
Statements about Self						
Statements about Others						
III. Roles in Social Interaction						
Group Membership Away From Home						
Group Membership at Home						
Family Stability						
IV. Attitudes Toward Environment						
Attends to Environment						
Responds to Environment						
<b>COGNITIVE DEVELOPMENT</b>						
I. Initiating Responses						
Reveals Independence						
Displays Curiosity						
Possesses Creativity						
Demonstrates Spontaneity						
II. Acquiring Information						
Maintains Attention						
Relates New with Old						
III. Understanding Experiences or Events						
Forms Concept						
Applies Concept						
IV. Solving Problems						
Identifies Problems						
Formulates Hypotheses						
Establishes Tests						
Gathers Data						
Summarizes Findings						
V. Introducing New Ideas						
Ventures Hunches						
Illustrates Graphic/Pictorial						
Applies Problem Solving Skills						

APPENDIX E

PARENT INTERVIEW SHEET

CONFERENCE WORK SHEET

NAME \_\_\_\_\_

DATE \_\_\_\_\_

CONFERENCE INITIATED BY \_\_\_\_\_

PURPOSE \_\_\_\_\_

Specify information revealed which helped to understand each of the following:

1. Child's attitude toward school...
2. Social development of the child...
3. Emotional development of the child...
4. Intellectual development of the child...
5. Parents' attitude toward the child...
6. Parental expectations for the child...
7. Parental attitude toward the school...
8. Parental methods of controlling the child...
8. Parental methods of controlling the child...

Comments or reactions to the conference...

Teacher \_\_\_\_\_



APPENDIX F

STATEMENT - DR. ANDERSON

## SYSTEMATIC AND SEQUENTIAL EVALUATION FOR INDIVIDUALIZING INSTRUCTION

Perhaps it would be helpful for you to receive some feedback based on my personal observations as I look back on the experiences of interaction as I served as a visiting consultant on your Title III project.

My overall impression of the workshop was a very positive one. The composition of the group cut across school levels and significant roles in a most satisfactory fashion. Because of the diversity of roles represented in the group I suspect that one of the most potent positive outcomes of the workshop will be an improvement in the amount and quality of communication that is taking place within the district. I felt there was a good deal of energy being expended in efforts to understand points of view from other levels and spheres of responsibility by the individual group members.

A good measure of progress toward a compatible and workable balance in group organization had been achieved prior to my appearance. The committees -- Philosophy, Instructional, Testing and Transmission -- had been established and were struggling to define their missions. I found these committees receptive to suggestions yet still critical as a responsible group should be. Most encouraging was a definite concern with practical limitations and practical needs. I found these participants asking pertinent questions and pressing for pertinent answers. The strategies they were struggling to find appeared to be appropriate for a district attempting to move toward a more child-centered approach to education.

One caution that I would offer, based on my own past experiences, is this. With so much to do and so many ways in which the committees may go, it will probably be impossible for them to synthesize and converge to a point of evolving a definite, final set of techniques and tools for facilitating the individualizing of instruction. And to make a beginning in identifying the kinds of attitudes that are to be encouraged is quite enough to expect

in so short a time. Therefore, I suggest that the committees become working groups which will operate throughout the coming school year. Follow-up activities and pilot projects in areas such as staff and community communications, evaluation techniques, transmission of data, public relations, and in-service training are clearly needed.

During my time with the project I felt there was discernible movement from mere involvement to a personal commitment on the part of several of the participants regarding the concept of child-centered education. They were discussing this at the operational level rather than at some rarified philosophical level. This attitude was also apparent in those members (and there were several of them) who lacked sophistication in the area of measurement and evaluation. It was most gratifying to see them lose their defensiveness about statistics, etc. and begin to glean for themselves some very useful and practical information about standardized information and data. Please accept my wishes for continued progress on this project and for its extension to the years to come. Good luck.

Dale G. Anderson  
Assistant Professor  
Washington State University

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Dale G. Anderson  
Assistant Professor  
Washington State University

APPENDIX G

STATEMENT - DR. BLACKHAM



## SYSTEMATIC AND SEQUENTIAL EVALUATION FOR INDIVIDUALIZING INSTRUCTION

Almost everyone agrees that one of the most cherished educational goals is the complete development of each child's individual potential. It is a lofty but important goal. And, many public schools are making progress toward its achievement. But, it also appears to be true, that complete attainment of this objective for all children may still be a considerable distance away.

The complete development of each child's individual potential involves three major variables in a relatively complicated equation: 1) a child and his unique developmental and learning style, 2) a curriculum dedicated to that uniqueness as well as important societal and educational goals, and 3) a sensitive, responsive teacher who creates a learning environment that skillfully blends the child's developmental needs with curricular content to achieve the desirable outcomes. Stated in this way, it all seems simple enough. However, at least two of the major variables, the child and the teacher, cannot always be predicted accurately. This is not because they are naturally resistant but simply because they are human. People react to experiences on the basis of what their perceived needs are, opportunities for self enhancement and the extent to which their cognitive structures are ready to effectively assimilate experience. People do not always behave as we, or they themselves want to, but how they need to. What they need to do may be at some variance with what is desirable in achieving the significant outcomes. In the final analysis, then, people make great steps toward actualizing potential when their individuality is respected and their needs are nurtured. Perhaps this is what we mean by individualizing instruction.

The project group addressed themselves insightfully to the elusive nature of these variables. Systematically they defined and refined the significant educational outcomes in ways that can be evaluated and implemented. The pitfalls in which many educators become entangled were skillfully avoided by operationally defining the objectives, carefully selecting the methods of measurement and systematically planning their implementation. Much too often education and educators have these tasks incomplete or undone.

There can be little doubt that the successful implementation of the work of this project group will make it more possible for children in the Olympia Public Schools to realize individual potential. That is an accomplishment of the highest order.

I consider it a privilege to have been a part of the project group and the opportunity it afforded me to be part of something that makes a difference.

Garth J. Blackham, Ph. D.  
Arizona State University

APPENDIX H

STATEMENT - DR. McDOUGALL

## SYSTEMATIC AND SEQUENTIAL EVALUATION FOR INDIVIDUALIZING INSTRUCTION

Having worked as a consultant with your SSEII study team (Sequential and Systematic Evaluation for Individualized Instruction) I would like to share with you a few observations concerning their activities.

My general impression of the study group and the structure that evolved was very positive. I hope that this summer's workshop activities represent the beginning of a process of study and communication rather than a unit of study only. One very valuable outcome will be the formulation of strategies for continued communication among the staff represented by the study group participants. I should like also to make the following specific observations:

1. The composition of the group was excellent representing administrators, teachers, and counselors from all levels, and representatives from special education and the central administration.
2. The committee structure which has evolved permits the group to deal with specific aspects of the overall problem of evaluation on a small group basis and to explore in depth matters relating to the testing program, recording and transmission of observational data, development of statements of philosophy, etc. The sharing of results of each committee with the total group permits cross-checking of progress and knitting together of the project. This committee structure appears to work very well. I think it's particularly wise to have a sub group working on statements of purpose and philosophy and a group exploring the relationship of the evaluation to the total instructional program.
3. The involvement of key administrators in the project is particularly helpful. They can serve to communicate needs and progress to other administration and staff. The ultimate success of the results and opportunity for continuance of study will depend in large part on the support of administrators. Care should be taken to keep them all informed.

4. The involvement of the special education people is very helpful. They can share both the progress and problems encountered in working with all members of the school and community from their vantage point.

5. The expert approach of the testing committee was indeed encouraging. I was impressed by the members of this committee. The questions they asked the consultants were all timely and they seemed to be up to tackling the toughest problems of all in the testing program--those of dealing with attitudes and communication of test results. They were asking the right questions and reflected the benefit of background study of test materials. I was most impressed with this group and I am sure they'll evolve a proposal for modification of the testing program which represents real progress.

6. The willingness of the total group to work on these problems of evaluation was exciting. It's a real fine group.

I'm quite sure the results of this study group will be felt throughout the district both through improved communication and by using of these people as resource people in the area of testing, evaluation, and improvement of instruction. As is true of any sound approach to improvement of curriculum and instruction, it must be continuous and on going. I hope you can encourage the committee to continue and also to involve other key people in the future. Needless to say, the preparation and discussion of a report of the work done here should have a positive effect on the staff and community. Perhaps it could also be shared with other schools and state agencies. I was happy to serve as a consultant to the group and regret we could not be with you longer.

William P. McDougall  
Professor of Education  
Washington State University